# ISCOR VANDERBIJLPARK STEEL

# ENVIRONMENTAL MASTER PLAN

# SPECIALIST REPORT

## CONSULTATION

BY
KEN SMITH ENVIRONMENTALISTS

SERIES IV
DOCUMENT IVS/SR/039
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1.3. The process of being effectively (verses cosmetically) consulted, builds respect, trust and a working relationship between IVS and its neighbours and environmentally sensitive people and parties.

2. **When is it done?** *(The Master Plan phase is actually an exercise that entails holistic and integrative investigation, planning, conceptual design, prioritisation and scheduling of the entire Works Area).*

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- Mitigate the poor relationships existing between certain of the neighbouring communities and the Works, and to

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Various Public Participation Processes were running prior to the initiation of the Master Plan; these included the evaluation of the Kiewiet Site as a potential regional landfill, the Vaal Triangle Air Pollution Action Committee and the Rietspruit Forum

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The APAC was established due to the concerns expressed by the Public over the air pollution, and aimed to provide a communication vehicle for the stakeholders to discuss common concerns, and work together to improve the air quality. In 1995 Patrick van den Bon of IVS become involved as the chairperson. Up until that time, the organisation was industry-based and concern was expressed at the lack of involvement by the Authorities. The APAC unsuccessfully tried to get this forum to become a regional air quality monitoring structure.

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A public participation process has been held during the establishment of this forum, which is a requirement for a Catchment Management Agency (CMA). The Rietspruit Forum was intended to be a subdivision of the Vaal Barrage Management Structure, but this never materialised. The aim of this forum is to create a working platform for all Stakeholders, and this is in the process of becoming an integrated structure, accommodating all aspects of environmental impacts.

# 2. Terms of Reference: P2 Process Planning

The Terms of Reference for the planning of the Public Participation process is described below.

## 2.1 Data gathering/initial conflict resolution

- Preliminary Stakeholder scan
- Zone of influence (perceived by IAP's)
- Participation Strategy Plan
- Stakeholder Scoping and preliminary Terms of Reference for further technical investigations
- Stakeholder data-base (initial) - undertake a literature search of all documents available
- Design of the Public Participation (P2) Process
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The frequency, level and make-up of the subcommittees / "working groups" was to be dependant on the level of outrage of the communities, the issues at hand (real-current, historical and/or potential versus perceived) and the perceived level of enviro-legal risk resulting in strategies for risk management. The success of this task was totally dependant on the latitude given by Iscor to the Public Participation team to engage in dialogue and develop (lasting and constructive) working relationships between Iscor and the neighbouring communities.

## 2.2 Scoping

Apart from the mandatory "Public Consultation" as prescribed for EIA's it was envisaged that Scoping as an integral part of public participation component of the Terms of Reference for specialist studies within the Master Plan would greatly assist – not only buy-in of the Master Plan's recommendations (thereby reducing risk of failed/unsustainable decisions), but also set the scene and lay the foundation for more efficient (cost and risk-effective) legally required Public Consultation: processes.

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The various alternatives identified and evaluated could require a different slant as to how the Stakeholder participation process is to be managed, especially where the alternative is identified by the Public or Authorities (externally), but expensive and not directly related to production efficiency.

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Strategic planning was intended to integrate and incorporate scenario planning for Stakeholder participation and Risk Communication in a holistic manner for the Master Plan phase.

## 2.5 Specialist Stakeholder Participation Report

This report is to compliment the Master Plan Report.

## 2.6 Project Management

Ongoing control of physical, schedule and budgetary targets.

# 3. Public Participation Practitioners

IVS appointed an associative group of specialist environmental scientists, engineers and practitioners, referred to as the OFT Master Plan Team, of which an independent Public Participation specialist agency was to undertake the process including strategy, design, implementation and data-base; namely Ken Smith Environmentalists (KSE).

This agency is a member of the International Association for Public Participation ($IAP_2$) and subscribes to:

- The core values of IAP2, and
- The proposed IAP2 Public Participation Code of Ethics.

## 3.1 Independence of Consultants and Practitioners

The independence of the consultants and practitioners to the proponent is a legal requirement. There is also a legal obligation to include public participation in Environmental Impact Assessments. This facilitates the management of the relationship between factual and perceptual information.

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# 4. Decision-making process

Four (and possibly five) independent sets of decision-making processes are legally required for this project (by the relevant Lead Agent), as described below:

- EIA Regulations for a listed activity – DACEL
- Registration of, and EIA for scheduled processes – DEAT & DACEL
- Water Use Licences - DWAF
- Minimum requirements for a landfill operation – DWAF
- Rezoning (possible for areas outside of the Works area should this become necessary) – DACEL.

## 4.1 Environmental Impact Assessment Regulations

The Environmental Impact Assessment (EIA) regulations are described by the guideline document entitled "EIA Regulations: Implementation of Sections 21,22 and 26 of the Environmental Conservation Act" and dated April 1998: this pertains to the currently applicable Environmental Conservation Act (ECA) (73) 1989 and supported by its successor, the National Environmental Management Act (NEMA)(107) 1998.

The following fundamental principles have been prescribed, namely:

- Section 21: **timing** of Stakeholder Participative process - in line with the philosophy of Integrated Environmental Management (IEM). The specific planning of the authorization processes for the individual projects should be formalized with the Stakeholders (including the Authorities) early enough for their environmental considerations to be effectively included in the decision-making process.
- Section 22: **accountability** - the proponent and the decision-makers are accountable for the impact/mitigation thereof, and authorization of the activity, respectively.
- Section 26: **involvement** - of the public is required for all decisions made that could affect them.

The integrated and holistic Master Plan has been commissioned by IVS to identify, assess, mitigate and monitor the relevant aspects and consequent impacts and risk to Human Health and the Environment, associated with the Works.

## 4.2 Scheduled processes

The Atmospheric Pollution Prevention Act, together with the Environmental Impact Assessment regulations prescribes the processes necessary for the registration of these authorizations and conditions.

## 4.3 Water Use Licences

The National Water Act (36) of 1998 makes provision for the registration of water uses – the process of which also includes consultation of the Interested and Affected Parties.

## 4.4 Minimum Requirements (MR)

The application of this guideline is administered by DWAF and governs the specifications of waste disposal by landfill as prescribed in Section 20 of the Environmental Conservation Act (73) 1989. The Minimum Requirement guidelines will be used to determine the specifications for the areas used for waste management.

## 4.5 Rezoning

The DACEL, in consultation with other Departments (for example, Housing) administers the Development Facilitation Act (67) 1995, and has in this regard published prescribed regulations governing rezoning for land development.

## 4.6 Integration of the authorization processes

The authorization processes (possibly including the DFA process) will be integrated for the following reasons:

- Inherent and legislated overlap of co-administration.
- Related activities and projects affecting one physical unit.
- Prevent confusion through different notification and consultation processes concerning one proponent (IVS).
- Optimal resource utilization for all Stakeholders concerned – time and cost (avoid unnecessary duplication).

As the requirements of the individual authorization processes become clear, they will be integrated. This integration forms the basis of the decision-making framework, with which the Public Participation Process should be aligned.

# 5. Methodology

## 5.1 Recommended modus operandi

The Public Participation process for the activities to be proposed at the IVS Works will be designed to facilitate the overall Master Plan exercise by obtaining decisions that are **sustainable**. In this context, sustainability infers a balance between five interrelated and mutually inclusive criteria, namely social, ecological, economic, governance and enviro-legal. In turn, the Public Participation process has three primary characteristics, namely

- **Value-based:** achievement of the desired goals (of both the proponent (IVS) and the Stakeholders) is directly influenced by the balance in value added to the sustainable environment (social, ecological, economic, governance and enviro-legal).
- **Objectives-driven:** the level of participation (inform/notify, consult, involve, collaborate, empower) is dictated by the objectives defined for the Master Plan.
- **Problem solving orientated:** pertinent objectives are aimed at solving a multi-perspective problem. The definition of the problem and consequent decisions that need to be made forms a strong foundation for focussing the Public Participation Strategy.

## 5.2 Principle Objective

In line with its mission to strive towards international standards, IVS needs to recognise the core values of the International Association for Public Participation (IAP2). These core values – as described below– have been incorporated and applied in the current planning exercise.

- ***The Public should have a say in decisions about actions that affect their lives.***
- ***Public Participation includes the promise that the public's contribution will influence the decision.***
- ***The Public Participation process communicates the interests and meets the process needs of participants.***
- ***The Public Participation process actively seeks out and facilitates the involvement of those potentially affected.***
- ***The Public Participation process involves participants in defining how they Participate.***
- ***The Public Participation process provides participants with the information they need to participate in a meaningful way.***
- ***The Public Participation process communicates to participants how their input affected the decision.***

## 5.3 Development of the process

In developing the process, a methodical and applied approach has been advocated: this comprised three phases, namely:

***Phase I: Understanding the problem***
***Phase II: Planning the Public Participation process***
***Phase III: Implementation, including evaluation***

A description of each phase is given below, with the respective steps of each:

***Phase I: Understanding the problem***

The Stakeholders have been provisionally identified (refer to Appendix A: Stakeholder database) and the problems provisionally described.

- Potential impacts: identify with a preliminary assessment.
- Predict the expected zone of influence on the receiving environment (refer to Figure 1).
- Predict issues of concern, interest, needs and aspirations of the Stakeholders (relates to those communities where participation had started).
- Predict the potential level(s) of controversy.
- Describe the problem – multi-perspective (that is, from a multi-perspective point of view: both that of IVS, together with all the other Stakeholders).
- Define the decisions to be made.

The above foundation of the exercise becomes far more sustainable when undertaken in conjunction with the Stakeholders (Authorities and IAP's).

### 5.3.1 Identify the preliminary Public Participation objectives

Identify the appropriate level of participation along the continuous spectrum of Public Participation (inform, consult, involve, collaborate, empower) for each of the four Sectors, namely East, North, West and South. Input is needed by Stakeholders and during the Specialist and Authorities pre-application consultation and subsequent scoping meetings with G-DACEL. This should be per specific project authorization application process. This can vary between the components ("cells") of the communities, either geographically, issues-driven or institutional; and/or between projects.

Apply the generic objectives, undertakings and tools to the proposed project.

### 5.3.2 Alignment of the Public Participation process

The public participation process should be aligned with the overall decision-making framework and procedure. (This is an iterative process with a mutually inclusive relationship i.e. the one influences the other).

The decision-making and communication process has been described below in Section 8, with regard to the "who, when, what and to whom" level alternate consequences. Alignment of the process should include:

- Specify Public Participation objectives for each step in the decision-making process.
- Modify and adapt to ensure integration; set reasonable and adequate target dates and objectives, identifying and considering the ramifications and implications thereof.
- Understand and clarify assumptions and perceptions, especially as to the level of influence in the decision-making process.
- Obtain agreement and commitment from the decision-makers (IVS as Proponent, and DACEL or as the Lead Agent).
- Obtain Stakeholder (including Regulating Authorities) confirmation and approval of process needs being met.

***Phase II : Planning the Public Participation process***

### 5.3.3 Develop the Public Participation strategy

- Each step in the decision-making process requires five components:
  - task/technique
  - resources
  - time needed / target date
  - responsible individual
  - comments (flags, warnings, tools etc.)
- Compile a comprehensive planning document for use by all participants (Plan of study)
- Include in the design a mechanism for iterative feedback, evaluation and improvement.

***Phase III: Implementation, including evaluation***

### 5.3.4 Implement the strategy

Ensure ongoing iterative feedback from Stakeholders, evaluation and improvement.

# 6. Stakeholders Identification

## 6.1 Provisional Zone of Influence

A provisional zone of influence should be used as a point of departure in identifying the first order list Stakeholders. A 1:250,000 topo-cadastral map of the area has been used for
this (refer to Figure 1.

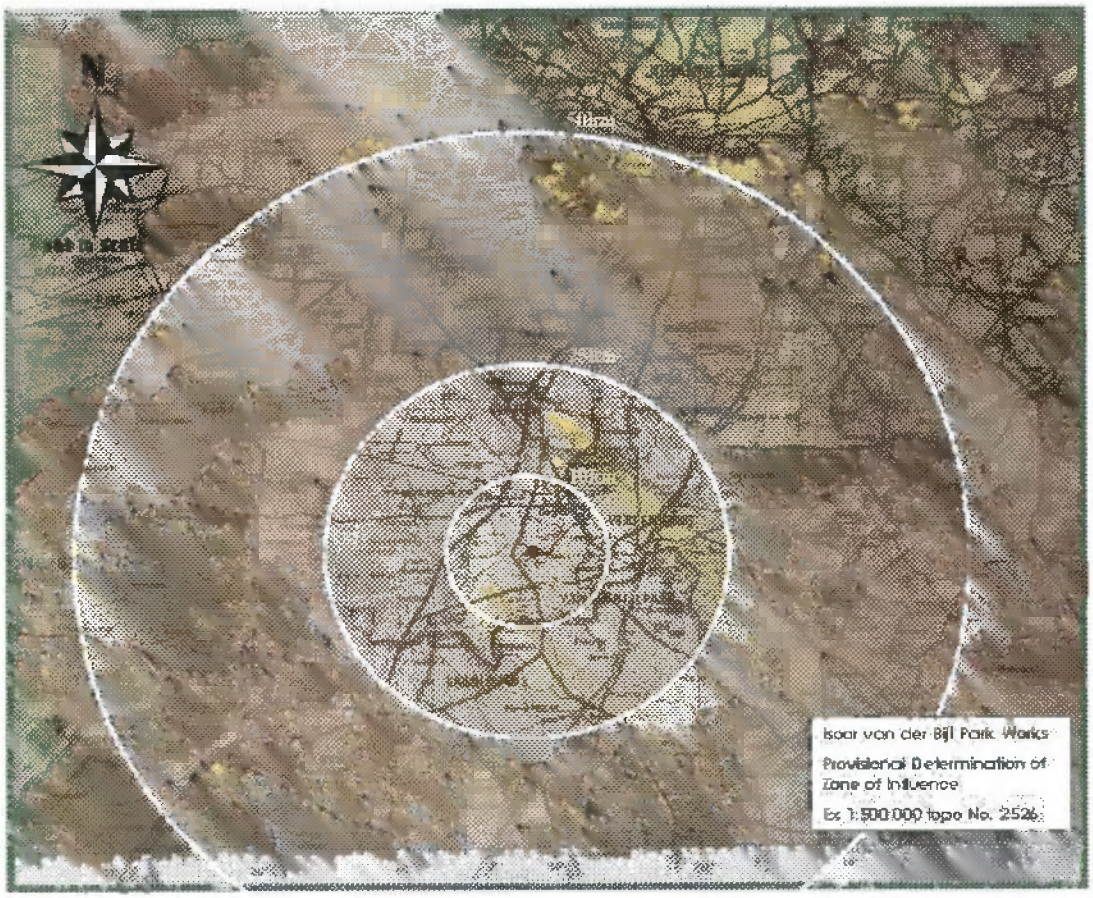



Figure 1: Provisional zone of influence

The provisional zone of influence has been divided into four geographic sectors, within which relatively homogeneous communities and subcomponents (cells) in are identified. The cells are consulted on a one-to-one basis, (informing and capacitating). Combined, compound meetings are held when more than one cell is ready, able and willing to join another. Ultimately, compound and integrated meetings for the entire zone of influence should be held, with representation from either segments or cells relative to the relevant issues, concerns, needs, and aspirations. Although Stakeholders tend to move within and between cells and/or segments, a state of dynamic equilibrium usually develops.

## 6.2 Authorities

The relevant Competent (Regulatory) Authorities have been consulted through the Master Plan Steering Committee. Due to the restrictions placed on data and information dissemination, the level of participation varied between Role-players according to the detail and extent of information received by the Authorities.

## 6.3 Potentially Affected Parties

The potentially affected parties could depend on either the location and extent of the impacts and risks associated with the proposed projects, for effects contained or limited in some way, or on an extensive impact, such as air pollution and socio-economic issues. This will be determined by site- and situation specific involvement processes to afford the potentially affected parties the opportunity to participate in the application processes.

## 6.4 Potentially Interested Parties

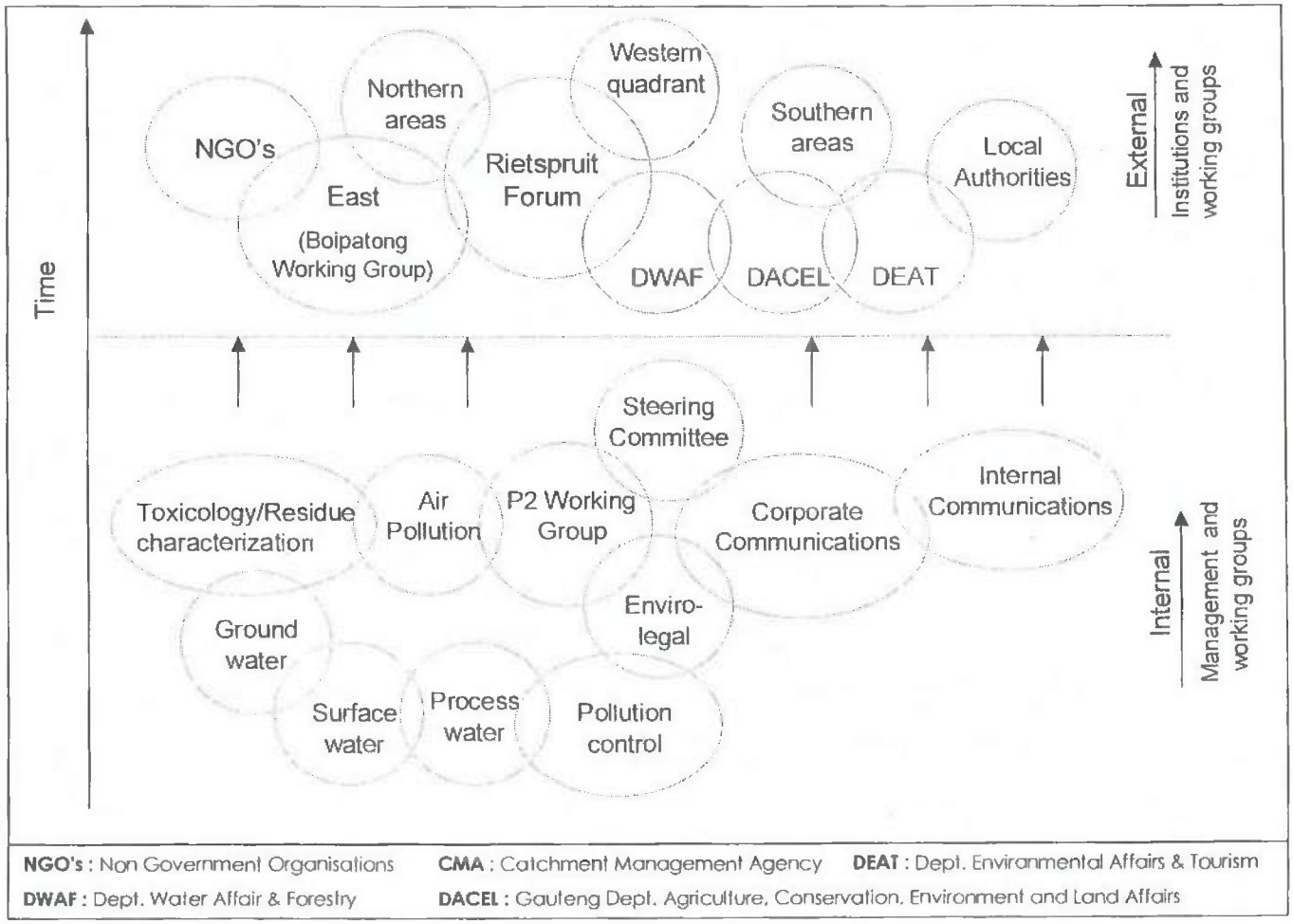
In a similar procedure to notifying the potentially affected parties, the parties interested in a project or activity will be notified through the press, and strategically placed public notices.

The data-base in Appendix A gives an indication of the preliminary Stakeholder scan for the general Works.

The Stakeholder groups should – ideally receive information relating the projects simultaneously: these relationships are schematically represented in Figure 2.

Figure 2 : Potential interrelationships between Stakeholders, with the information flows.

(Note: All Stakeholder components should receive information at a similar point in time).




**NGO's** : Non Government Organisations **CMA** : Catchment Management Agency **DEAT** : Dept. Environmental Affairs & Tourism

**DWAF** : Dept. Water Affair & Forestry **DACEL** : Gauteng Dept. Agriculture, Conservation, Environment and Land Affairs

# 7. Key Issues of Concern

## 7.1 Key Issues

Various key issues of concern to the potentially Interested and Affected Parties (IAP's) were provisionally identified during the limited consultation process. This was supplemented by relevant personnel from the Works who have previously been involved with the communities, and from the experience of the Specialists and Authorities of the Master Plan Steering Committee. These issues have been generally grouped and comprise several broad categories, listed below.

- **Air pollution (health):** the atmospheric pollution in the area with a resultant negative effect on health and quality of life, is indicated to be a general source of concern to the communities lying downwind of the Works, and also to the Authorities.

- **Water pollution:** the two wetland systems on the western (Rietkuilspruit) and eastern (Leeuwspruit) flanks of the Works are also an issue of concern in regard to compromised fitness for use. This, in turn, also affects the risk to human health and to the environment (aquatic ecosystems). Ground water is – in itself a great cause for concern.

- **Socio-economics:** Implementation of the Master Plan itself by the Works will not have a direct and significant impact on the socio-economics of the area, except perhaps during the implementation of the pollution control measures and rehabilitation. It will however, help to:

  - Ensure a more sustainable steel-making process and to secure better markets for the overseas product; in turn, assisting in

  - Secure the existing source of employment for the current workforce, and downstream enterprises

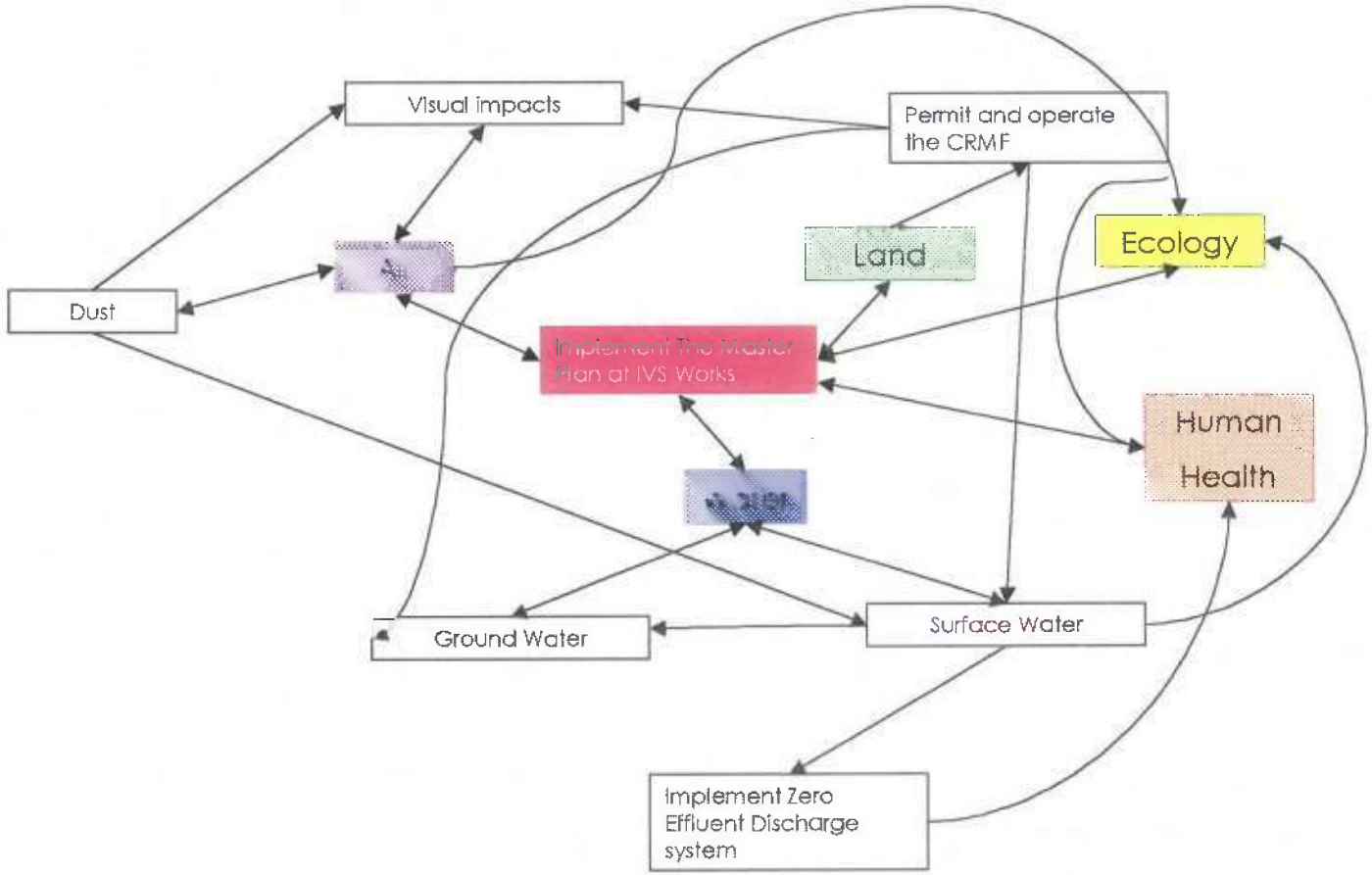
  - Improving the quality of life and the value of property in the vicinity.

A socio-economic analysis of the sub-region has been compiled as part of the Master Plan specialist studies - refer to Appendix D: Prospects for the Regeneration of the Vaal Triangle Economy.

- **Visual impacts:** the dust and emissions generated by – and from factories in the vicinity of the Works is an issue, together with the unsightly dumps. Especially of concern in this regard, is the dust associated with the rehabilitation (out-sloping and landscaping of the of the western flank of the Existing Waste Dump).

A schematic representation of some of the more important (provisionally) linkages between the issues of concern has been depicted below in Figure 3.

Figure 3: Provisional linkages between preliminary issues



## 7.2 Issues and concepts with potential for misinterpretation:

Various key issues of concern have the potential to be misinterpreted as a result of either a lack of understanding, inadequate information being provided, or a distrust of the source of the information. These need – on a project-specific basis to be identified and incorporated into the Risk Communication strategy. An account of the basics of Risk Communication is available under Appendix E of this report.

Examples of this could be the potential for misinterpretation of the concepts of "poisonous " and pollution and risk. These need to be defined from different **perspectives**, (scientific, educated public, partially educated public, relevant language groups, etc.):

Group 1:
- Toxic, toxicity
- Hazard, hazardous
- Poison, poisonous
- Lethal, deadly
- Any other similar expressions or words

Group 2:
- Pollution
- Contamination
- Fitness for use
- Any other similar expressions or words

Group 3:
- Risk
- Probability
- Dangerous
- Safe
- Any other similar expressions or words

The strategy of knowledge and information upliftment and empowerment (environmental education and awareness) is advocated to communicate these concepts to the Stakeholders, in order to afford them a sufficient understanding to enable them to effectively participate in the authorization processes for IVS.

# 8. Communication

The effective communication of information is crucial to a consultation process. Two models have been described for application during, and subsequent to the Master Plan study.

- Once the need and/or opportunity for public participation has been identified, and the various internal and external focus (working) groups begin working together, information needs to flow backwards and forwards. Figure 4 describes a simple model for this level of communication protocol.

- Figure 5 refers to a slightly more detailed model for the dissemination of information.

Figure 4 : Public Participation Communiques

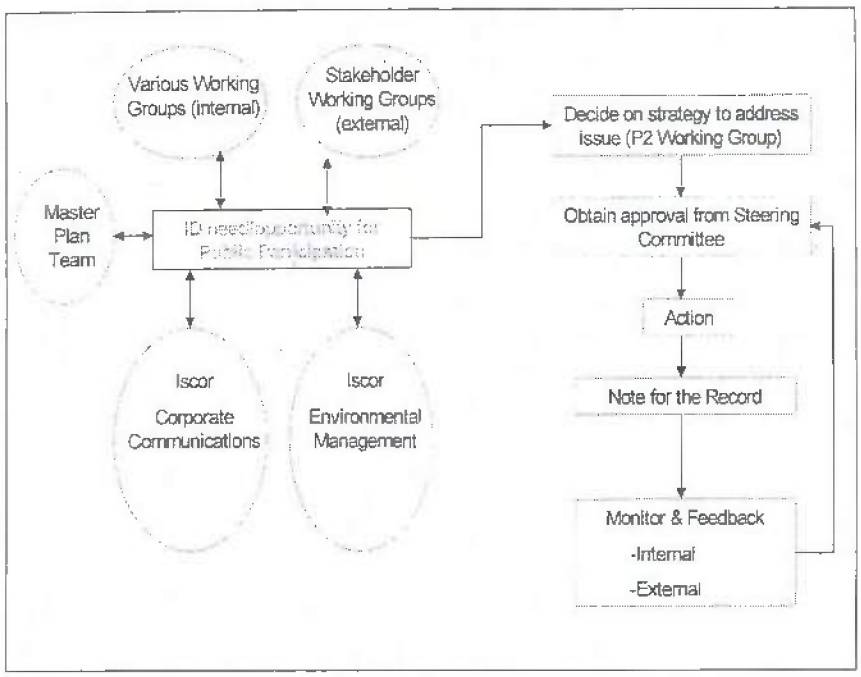
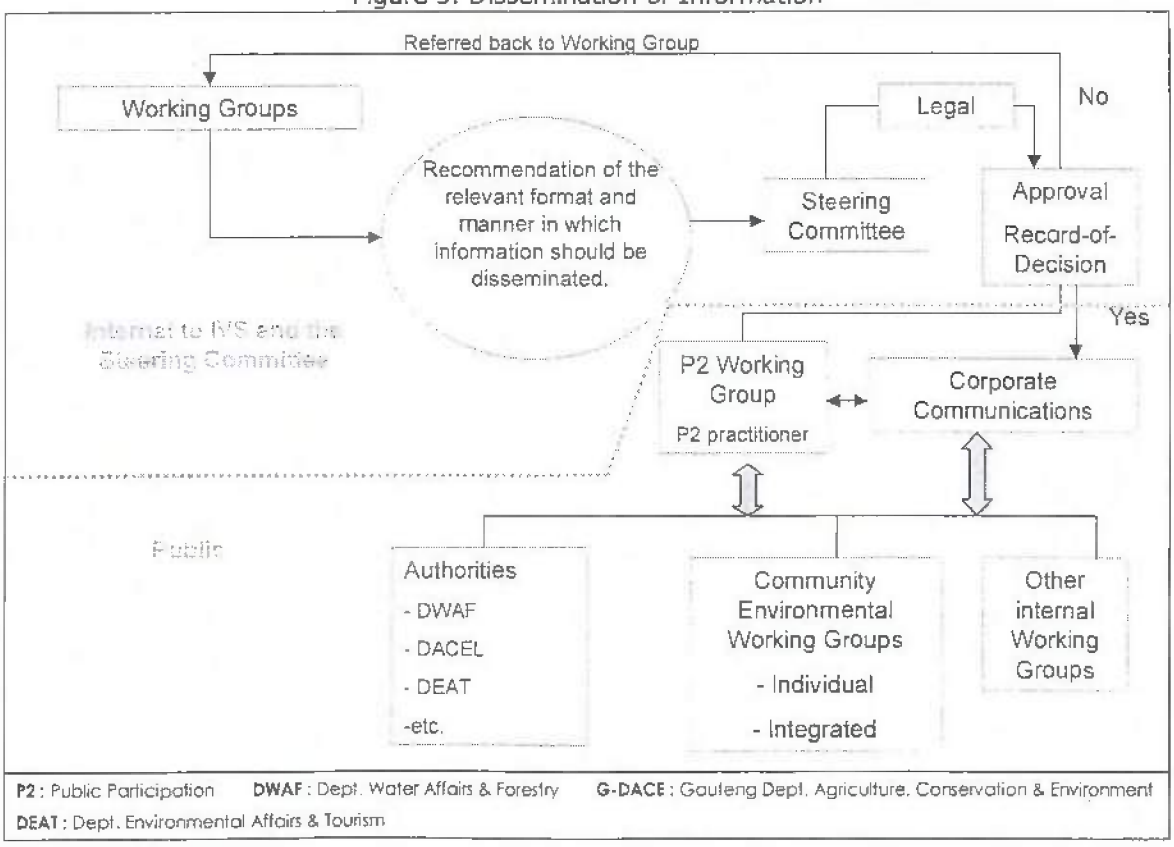



Figure 5: Dissemination of Information



# 9. Conclusions and Recommendations

This study for the IVS Works has developed a Master Plan that should enable the Works to prepare the way forward for a holistic, integrated and sustainable programme of reducing the impact and risk to human health.

This "brownfields" remediation project should be regarded as a particularly positive one from an environmental point of view, as the aspects and impacts have been identified and assessed by the Specialists on the basis of before (actual) and after mitigation (predicted). The long-term consequence will be significant and positive from the point of view of environmental and human health considerations.

Economically, a ten-year implementation programme has been developed by the environmental Master Plan (of which, this report is a component), that IVS should be able to afford. In turn, this environmentally responsible attitude towards steel manufacturing will go a long way to ensuring the marketability of the product to equal-minded customers, and thus aiding the sustainability of the Works.

The Terms of Reference for the Master Plan specialist studies has been supplemented to some extent by input from the Stakeholders during the limited participative exercise. The process of involving the Stakeholders should now begin in earnest through the proposed Integrated Environmental Monitoring Committee. Any additional issues of concern (in level of detail and /or extent of the issues) raised during the future Public Participation processes for the authorization applications will need to result in a project-specific Terms of Reference being compiled and undertaken.

A Public Participation process is required in terms of the EIA requirements for the application of an authorization for a listed activity or permit for a landfill (Consolidated Residue Management Facility), amongst others. The relevant authorities and other stakeholders will require intensive and ongoing input into the participative decision-making authorization processes, and now require the opportunity to review the Master Plan and consequent application reports. Due process will also need to be (and perceived to have been) followed, and the input by Stakeholders during the Public Participation considered and used to complement the overall EIA and permit application processes.

This proposed framework for the Stakeholder Participation Strategy is submitted as a Specialist Report intended to supplement the Master Plan for the Iscor Vanderbijlpark Steel (IVS) Works. The report is based on information gathered during a two-and-a half-year period during which the Master Plan was compiled. The source of the information was a combination of generic theory, applied to the IVS Works situation on the basis of the

outcome of the project Steering Committee meetings (which included the Competent Authorities), and to a limited extent, consultation with the Public.

This strategy has been designed to be sufficiently broad-based to accommodate the Public Consultation processes, as will be required for the imminent environmental authorization applications.

**K. K. Smith** ***(Pr. Sci. Nat.)***
Environmental Public Participation

For Ockie Fourie Toxicologists

with input from:

L. D. Mokgokong: Public Participation Practitioner

A. G. Manning: Environmental Practitioner

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2. 2000 IAP2 Designing effective Public Participation Programmes.
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19. Department of Water Affaires and Forestry guide for Catchment Management Agencies (CMA) Water use Association (WUA) guide services. Public Participation for CMA, WUA.

20. A socio-economic analysis of the sub-region has been compiled as part of the Master Plan specialist studies - refer to Appendix D: Prospects for the Regeneration of the Vaal Triangle Economy.

21. National Environmental Management Act 1998: NEMA Act 107 of 1998.

22. National Water Act 36 of 1998 (NWA)

## Appendix A: Stakeholder Database

(Refer to the Exel Spreadsheet attachment).

Appendix A: IVS Data-base (provisional)

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Post Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mr. | L | Amaral | Supervac Services | | 016 454 | 016 454 | P.O. Box 4356 | Vereeniging | 1930 |
| Mr. | P | Bagrath | African Gables | | 016 423 | 016 423 | P.O.Box 172 | Vereeniging | 1930 |
| Mr. | Tumelo | Baloyi | AGHEG - BEWG | | | | | | |
| Mr. | J | Banfield | Donvalta Holding T/A Dixon Batteries | | 016 455 | 016 422 | P.O.Box 81 | Vereeniging | 1930 |
| Mr. | SA | Bannister | Enserve | | 016 933 | 016 933 | P.O.Box 5666 | Vanderbijlpark | 1900 |
| Mr. | W | Barnes | | Councillor | 016 660 | 016 660 | P.O.Box 555 | Randvaal | 1873 |
| Ms | DJ | Basson | | Town Planner | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | H | Beckman | Deneysevile\ Refengkgotso TLC | | 016 371 11 | 016 371 | P.O. Box 16 | Deneysville | 1932 |
| Clr | JMC | Bekker | Executive Committee | | 016 932 | 016 931 | 53 Schuman Street | Vanderbijlpark | 1911 |
| Mr. | N | Bentley | Steel Pipe Industries | | 016 428 | 016 427 | P.O.Box 8013 | Elandsfontein | 1406 |
| Mr. | SJ | Besani | Vredefort | Chief Executive Officer | 056 931 | 056 931 | P.O.Box 16 | Vredefort | 9595 |
| Mr. | R | Bettman | Consolidated Wire Industries | | 016 803 | 016 988 | P.O.Box 102 | Vanderbijlpaark | 1900 |
| Ms | V | Black | Environmental Justice Network | | 011 838 | 011 838 | P.O.Box 32184 | Braamfontein | 2017 |
| Ms | Rina | Blignaut | Dorby; Structural Engineering | | 016 860 | 016 860 | P.O.Box 14 | Vereeniging | 1930 |
| Mr. | F | Bloem | Nampak Dilpac | | 016 950 | 016 950 | P.O.Box 120 | Vanderbijlpaark | 1900 |
| Mrs | MM | Blom | NFSDC | Head -Public Relation/Tourism | | | P.O.Box 10 | Sasolburg | 9570 |
| Clr | MJ | Blom | Western Gauteng Service Council | Services Council | 0149 789 | 011 412 | 22 lane no 12 | Blyvooruitsing | 2499 |
| Mr. | D | Boden | Natref | | 016 940 | 016 940 | P.O.Box 234 | Sasolburg | 9570 |
| Dr. | Nico | Boegman | ENPRO | | | | | | |
| Mr. | B | Boshoff | Greater Kroonstad | Chief Executive Officer | 056 222 | 056 223 | P.O.Box 302 | Kroonstad | 9500 |
| | C | Bosman | DWAF - National Government | | 012 338 | 012 323 | P/Bag X 313 | Pretoria | 0001 |
| Clr | PE | Bosman | | Ward Councillor:5 | 016 421 | 016 421 | 3 Bessener Str | Dunconville | 1939 |
| Ms | Susan | Botha | Sekretaresse: Vaste-Afval | | 011 820 | 011 820 | P/Bag X 1069 | Germiston | 1400 |
| Ms | G | Bothma | DACEL | Environment | 011 355 | 011 337 | P.O. Box 8769 | Johannesburg | 200 |
| Ms | Mia | Bouwer | Anglo American | | 011 638 | 011 638 | | | |
| Clr | M | Brele | | Proportional Councillor | 016 284 | 016 421 | 39 DuggieMork | Unitas Park | 1942 |
| Mr. | G | Bruwer | Universal Recycling (sub-division of Cape Gate) | | 016 889 1450 | 016 988 4051 | 25 Henry Str | Vanderbiljpaark | 1911 |
| Dr. | Z | Budnik-Less | DACEL | Environmemt | 011 355 | 011 337 | P.O.Box 8769 | Johannesburg | 200 |
| Mr. | G | Burnham | Apex Foundry (scaw metals) | | 016 421 | 016 421 | P.O.Box 313 | Vereeniging | 1930 |
| Clr | FJ | Buter | | Ward Councillor :6 | 016 234 | 016 422 | Lexaria Building | Vereeninging | 1930 |
| Mr. | F | Cassar | Steeledale Mesh | | 016 362 | 016 362 | P.O.Box 916 | Meyerton | 1960 |
| Ms | Shawn | Catterall | Endangered Wildlife Trust | | 011 486 | 011 486 | P/Bag X11 | Parkview | 2122 |
| Clr | Y | Chamda | Lekoa Vaal Dev Forum | Mayor : lekoa Vaal Chairperson | 016 450 | 016 455 | P.O.Box 471 | Vereeninging | 1930 |
| Ms | Josephin | Chauke | Boipatong Resident | | | | | | |
| Mr. | Phillimon | Chauke | Boipatong PMA | | | | | | |
| Mr. | SM | Chebose | | Councillor | 016 989 | 011 412 | | | |
| Clr. | FC | Coetzer | Sasolburg TLC : Ward 1 | | 016 971 | 016 973 | 12 Hottentoth | VaalPark | 9570 |
| Clr. | JH | Coetzer | Sasolburg TLC: Ward 3 also member of Executive Comm | | 016 976 1904 | 016 973 2191 | 39 Wagneer Str | Sasolburg | 9570 |
| Mr. | D | Coetzer | Sasol Chemical Industries | | 016 960 | 016 960 | P.O.Box 01 | Sasolburg | 9570 |
| Mr. | DP | Colbert | Greater Kroonstad TLC | | 056 222 | 056 223 | C/O P.O.Box 302 | Kroonstad | 9500 |
| Mr. | PR | Combrinck | Greater Kroonstad TLC | | 056 269 | 056 269 | P.O.Box 302 | Kroonstad | 9500 |
| | JA | Cooks | Karbochem | | 016 970 | 016 970 | P.O.Box 19 | Sasolburg | 9570 |
| Mr. | BHB | Cronje | Vaaldam TRC | | | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Mr. | James | Cross | Moolmans Attorneys Incorporated | | 011 483 | 011 483 | | | |
| Clr. | JW | Cunningto | Sasolburg TLC: Ward 2 | | 016 971 | 016 973 | 23 Karas Ave | VaalPark | 9570 |
| Mr. | Tony | Da Costa | Iscor HQ | | | | | | |
| Dr. | JA | Dannhause | The Business Bulletin | | 051 430 | 051 430 | P O Box 290 | Bloemfontein | 9300 |
| Ms | C | Davidson | Rand Water: | Catchment Advisor | | 011 682 | P.O.Box 1127 | Johannesburg | 2000 |
| Mr. | Jack | Davies | Protekon | | 031 361 | 031 361 | | | |

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Post Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mr. | E | Davis | Lime Distributors (Pty) Ltd | | 016 455 | 016 421 | P.O.Box 2773 | Vereeniging | 1930 |
| Ms | G | de Beer | Specplate Electroplating | | 016 455 | 016 455 | P.O.Box 1949 | Vereeniging | 1930 |
| Clr | PJ | de Bruyn | | Ward Councillor: 8 | 011 337 | 011 337 | 22 Varing Str | Meyerton East | 1961 |
| Mr. | WF | de Jongh | SA Roll Company | | 016 860 | 016 860 | P.O.Box 5360 | Vanderbijlpaark | 1900 |
| Ms | Erica | De Kok | Presentation Graphics | | 012 664 | 012 664 | | | |
| Mr. | I. | Deale | Sasol Oil | | 011 889 | 011889 | P O Box 4211 | Randburg | 2125 |
| Dr. | JI | deVilliers | Sasolburg TLC | Councillor- Ward 4 | 016 976 | 016 973 | 32 Billingham Str | Sasolburg | 9570 |
| Mr. | Sammy | Dibate | BBDO | | | | | | |
| Clr | MS | Diphare | | Member of Executive | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | LT | Dipone | Western Gauteng Services Council | Services Council | | 011 412 | P.O.Box 51 | Tarlon | 1749 |
| Ms | Tshidi | Dlamini | ANCWL | | | | | | |
| Clr | GS | Dlova | | Ward Councillor | 016 950 | 016 950 | 62565 Zone 7 | Sebokeng | 1983 |
| Mr. | L | Dormehl | | Official | 016 660 | 016 660 | P.O.Box 565 | Randvaal | 1873 |
| | JC | du Plessis | EMSA | | 016 362 | 016 362 | P.O.Box 43 | Meyerton | 1960 |
| Mr. | D | Du Plessis | Dept of Min & Energy | | 013 656 | 013 656 | P/Bag X7279 | Witbank | 1035 |
| Ms | L | du Plooy | | | 011 403 | 011 403 | P.O.Box 23703 | Braamfontein | 2017 |
| Mr. | CP | Du Plooy | Dept of Envir Affairs | | 011 823 | 011 823 | P O Box 14039 | Witfield | 1467 |
| Mr. | Henry | Du Preez | Iscor IVS | | | | | | |
| Mr. | P | du Preez | VESCO | | 016 931 | 016 981 | P.O.Box 1 | Vanderbijlpaark | 1900 |
| Mr. | J | du Preez | Environmental and Waste | | 016 427 | 016 455 | P.O.Box 471 | Vereeninging | 1930 |
| Mr. | A | du Toit | Parys | Chief Executive Officer | 056 821 | 056 876 | P.O.Box 359 | Parys | 9585 |
| Mr. | JJS | du Toit | Vaaldam IRC | | | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| | FJ | Du Toit | Sastech R&D | | 016 960 | 016 960 | P.O.Box 01 | Sasolburg | 9570 |
| Mr. | T | du Toit | Oranjeville/Metsimaholo TLC | | 351 1610 | 651 1794 | P.O.Box 39 | Oranjeville | 1995 |
| Ms | S | Dube | Engineerring Service | | 016 427 | 016 427 | P.O.Box 471 | Vereeninging | 1930 |
| Mr. | DG | Emett | Department of Transport and Public Works : Gauteng | | 011 355 7349 | 011 355 7325 | | | |
| Mr. | J | Erasmus | Turnmill Engineering Works | | 016 422 | 016 421 | P.O.Box 2092 | Vereeniging | 1930 |
| Mr. | R | Erasmus | Mourik SA | | 016 451 | 016 451 | P.O.Boc 1944 | Vereeniging | 1930 |
| Mr. | CJR | Esterhuizen | Sigma Colliery | | 016 | 016 973 | P O Box 32 | Sasolburg | 9570 |
| Mr. | Lele | Fantisi | BEC - BEWG | | | | | | |
| Mr. | D | Faul | All Chem Hydro | | 016 931 | 016 931 | P.O.Box 58 | Vanderbijlpaark | 1900 |
| Clr | NJA | Felix | Western Gauteng | Services Council | 016 989 | 011 412 | P.O.Box 1160 | Vanderbijlpark | 1900 |
| Clr. | C | Felix | VaalRiver RC | Chairperson | 016 989 | 011 412 | | | |
| Ms | Carol | Ferguson | Iscor IVS | Senior Manageress | 016 889 | 016 889 | | | |
| Mr. | T | Figgins | | Chief Executive Officer-Acting | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | LJ | Filmater | | Ward Councillor | 016 932 | 016 950 | 9 Wenning Str | Vanderbijlpark | 1911 |
| Ms | D | Fischer | DACEL | Environment | 011 355 | 011 337 | P.O. Box 8769 | Johannesburg | 200 |
| | C | Foster | Nampak Tissue Klipriver | | 016 903 | 016 903 | P.O.Box 03 | Klipriver | 1871 |
| Mr. | Paul | Fouche | Iscor: Instrumentation Department | | 016 889 | 016 889 | 14 Alheit Str | Vanderbijlpaark | 1900 |
| Mr. | P | Foulds | Polifin | | 016 920 | 016 920 | P.O.Box 521 | Sasolburg | 9570 |
| Dr. | Ockie | Fourie | OFI | | 012 348 | 012 348 | | | |
| | S | Fourie | Gauteng Nature Conservation | | 012 303 | 012 303 | P/Bag X 209 | Pretoria | 0001 |
| Mr. | G | Gerber | | Councillor | 016 660 | 016 660 | P.O.Box 555 | Randvaal | 1873 |
| Mr. | HM | Gerber | Wind assistant Besfuurder: Vaste Afval: Stedelik Ontwikkeling | | 011 820 4000 | 011 820 4011 | P/Bag X 1069 | Germiston | 1400 |
| Mr. | Brent | Gericke | SAVE, Parys | | | 016 983 | P O Box 383 | Parys | 9585 |
| Mr. | JC | Geyer | Sasolburg | Chief Executive Officer | 016 976 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Ms | M | Gibbs | Sasolburg College | | 016 976 | 016 973 | P/Bag X 2009 | Sasolburg | 9570 |
| Mr. | B | Gibson | Brain Gibson Issue Management | | 011 880 | 011 880 | P.O. Box 406 | Paklands | 2121 |
| Mr. | S | Gilchrist | Valley Refractories | Property Owner | 016 421 | 016 422 | P.O.Box 2422 | Vanderbijlpaark | 1900 |

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Posl Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mr. | M | Ginster | Sastech R&D | | 016 960 | 016 960 | P.O.Box 01 | Sasolburg | 9570 |
| Ms | E | Gombault | Enviroserv | | 011 456 | 011 453 | P.O.Box 232 | Bedfordview | 2008 |
| Mr. | P | Grange | Cape Gate (Pty) Lfe | | 016 980 | 016 980 | P.O.Box 54 | Vanderbijlpaark | 1900 |
| Mr. | DC | Grant | Natref | | 016 940 | 016 940 | P O Box 234 | Sasolburg | 9570 |
| Mr. | Ralph | Grey | Rand Water | | 011 682 | 011 682 | | Johannesburg | 2000 |
| Clr | GAJ | Grobler | Ward Councillor :9 | | 016 362 | 106 421 | 41 Waterbok Rd | Meyerton exten | 1961 |
| Mr. | A | Groenewal | Vaaldam IRC | | | 058 892 | P.O.Box 45 | Heilbron | 9650 |
| | D | Ground | DEAT National Government | | 012 310 | 012 320 | P/Bag X 447 | Pretoria | 0001 |
| Mr. | Archie | Hamilton | Iscor IVS | | | | | | |
| Mr. | P | Hanney | Natref | | 016 940 | 016 940 | P O Box 234 | Sasolburg | 9570 |
| | | Haskins | DACEL - Nature Conservation | | 012- 303 | 012- 303 | P/Bag X 209 | Pretoria | 1 |
| Mr. | Christo | Hatting | Iscor IVS | | | | | | |
| Mr. | A | Hennigan | VRSA | | 016 983 | | | | |
| Ms | | Hennigan | VRSA | | 016 983 | | | | |
| Clr | C | Herbst | West VallMetro local Council | | 016 950 | 016 981 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | P | Herbst | DWAF | | 012 336 | 012 323 | P/Bag X313 | Pretoria | 1 |
| Mr. | WF | Heunes | Nordberg (PTY) Ltd | | 016 422 | 016 422 | P.O.Box 716 | Vereeniging | 1930 |
| Dr. | Carl | Heymann | | Proportional Councillor | 016 231 | 016 421 | P.O.Box 263534 | Three Rivers | 1935 |
| Mr. | Lovers | Hlabekoe | Boipatong Environmental Club | | | | | | |
| Clr | JJ | Hlahasoan | | Proportional Councillor | 016 422 | 016 421 | 4 Umtata Str | Vereeninging | 1930 |
| Mr. | Jaffer | Hlazo | Boipatong PMA | | | | | | |
| Clr | NG | Hlongwane | | Proportional Councillor | | 016 421 | P.O.Box 35 | Vereeninging | 1930 |
| Clr | Martin | Hlubi | | | 016 988 | | | | |
| | P | Hoge | | | | | | | |
| Mr. | PL | Hoge | Rand Water | | 011 682 | 011 682 | P O Box 1127 | Johannesburg | 2000 |
| Mr. | GR | Holmes | Cape Gate (Pty) Ltd | | 016 980 | 016 980 | P.O.Box 54 | Vanderbijlpaark | 1900 |
| Clr | RIM | Hom | Western Gauteng Services Council | | 011 664 | 011 412 | 58 Ruben Str | Krugersdorp | 1740 |
| Mr. | Roelf | Human | Petronet | | 011 978 | 011 978 | | | |
| Mr. | J | Jacobs | Villiers | Chief Executive Officer | 058 821 | 058 821 | P.O.Box 23 | Villiers | 9840 |
| Mr. | Karl | Janse van | Gauteng Nature Conservation | | 012 303 | 012 303 | P/Bag X 209 | Pretoria | 1 |
| Mr. | I | Joemath | | | 011 355 | 011 355 | P.O.Box 8623 | Johannesburg | 2000 |
| Clr | ME | Jonas | | Ward Councillor:18 | 011 450 | 011 789 | 3486 Section G | Palm Springs | 1984 |
| Mr. | HW | Jonker | Deneysevile | Chief Executive Officer | 016 371 | 016 371 | P.O. Box 16 | Deneysville | 1932 |
| Mr. | Andre | Jordaan | Iscor IVS | | | | | | |
| Ms | M | Jordaan | Urbanisation and Development | | 016 427 | 016 427 | P.O.Box 471 | Vereeninging | 1930 |
| Mr. | J | Jordaan | Emergency and Disaster | Director | 011 411 | 011 412 | P/Bag X 033 | Randfontein | 1760 |
| Mr. | Neluis | Joubert | Iscor IVS | | | | | | |
| Mr. | | Kalman | | | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | L | Kamolane | Management Services | | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | Collin | Kapp | Iscor IVS | | 016 889 | 016 889 | | | |
| Mr. | TM | Kawu | Vaaldam IRC | | | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| | M. M | Keet | DWAF | | 012 672 | 012 672 | P/Bag X 8007 | Hennospark | 46 |
| Mrs | MH | Kellerman | Safripol | | 016 970 | 016 970 | P.O.Box 700 | Sasolburg | 9570 |
| Mr. | DJ | Keyser | Sasolburg TLC | | 016 976 | 016 976 | P O Box 89 | Sasolburg | 9570 |
| Clr. | DJ | Keyser | Sasolburg TLC: NP | | 016 976 | 016 973 | 37 Van Eck Str | Sasolburg | 9570 |
| Clr. | ME | Khoetheia | Sasolburg TLC | Deputy Mayor | | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Clr | S V | Khumalo | | Councillor | 016 437 | 016 455 | P.O.Box 471 | Vereeninging | 1930 |
| Mr. | KJ | Khumalo | Vredefort TLC | | 056 931 | 056 931 | P.O.Box 16 | Vredefort | 9595 |
| Clr. | SD | Khunou | Sasolburg TLC : ANC | | 016 974 | 016 973 | 2094 Dhaja Str | Zamdela | 9571 |
| Mr. | T | Kirsten | Iscor Vereeniging | | 016 440 | 016 440 | P.O.Box 48 | Vereeniging | 1930 |
| Mr. | G | Klopper | Baldwin Steel | | 016 988 | 016 988 | P.O.Box 996 | Vanderbijlpaark | 1900 |
| Mr. | Karl | Knupfer | Iscor IVS | | | | | | |

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Post Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mr. | TT | Kotsi | Frankfort TLC | | 058 831 | 058 833 | C/O P.O.Box 2 | Frankfort | 9830 |
| Mrs | NV | Kroon | Private | | 016 976 | 016 976 | P O Box 572 | Sasolburg | 9570 |
| Mr. | D | Kroon | Private | | 016 976 | 016 976 | P O Box 572 | Sasolburg | 9570 |
| Mr. | L | Kruger | Northern Free State District Council: Managher Technical | | 016 976 0765 | 016 976 0769 | P.O. Box 10 | Sasolburg | 9570 |
| Mr. | HJH | Kruger | Viljoenskroon | Chief Executive Officer | 056 343 | 056 343 | P/Bag X 02 | Viljoenskroon | 9520 |
| Mr. | M | Kruger | Universal Recycling | | 011 474 | 011 474 | P.O.Box 43584 | Industria | 2042 |
| Mr. | WJ | Kruger | Resinite SA (Pty )Ltd | | 016 860 | 016 860 | P.O.Box 670 | Vanderbijlpaark | 1900 |
| Mr. | H | Kruger | Suprachem | | 016 889 | 016 889 | P.O.Box 10202 | Vanderbijlpaark | 1900 |
| Mr. | PJ | Kruger | Northern Free State District Council | | 016 976 | 016 976 | P.O. Box 10 | Sasolburg | 9570 |
| Mr. | TDJ | Kuys | Iscor - Vereeniging Woks & Property | | 016 440 | 016 440 | P.O.Box 48 | Vereeniging | 1930 |
| Mr. | John | Lamprecht | Rand Water | | 011 682 | 011 682 | | Johannesburg | |
| Mr. | M | Laubscher | Cleansing | | 016 450 | 016 422 | P.O.Box 35 | Vereeninging | 1930 |
| Mr. | HJ | le Roux | Greater Kroonstad TLC | | 056 269 | 056 269 | P.O.Box 302 | Kroonstad | 9500 |
| Clr | LM | Lehoko | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | Johannes | Leshaba | BEC - BEWG | | 016 988 | | | | |
| Mr. | GD | Lewis | Villiers TLC | | 058 821 | 058 821 | P.O.Box 23 | Villiers | 9840 |
| Mr. | D | Lingenveld | | Councillor | 016 989 | 011 412 | | | |
| | L | Lotter | Gauteng Nature Conservation | | 012 303 | 012 303 | P/Bag X 209 | Pretoria | 0001 |
| Mr. | HJ | Loubser | Sasol Oil | | 011 889 | 011 889 | P O Box 4211 | Randburg | 2125 |
| Mr. | A | Louw | Omnia Fertilisers | | 016 976 | 016 976 | P.O.Box 384 | Sasolburg | 9570 |
| Mr. | Willie | Louw | Emfuleni Local Metro Council | | 016 988 | 016 988 | | | |
| Ms | Dinah | Louw | Local Council | | 016 950 | | | | |
| Mr. | D | Lubbe | Oranjeville | Chief Executive Officer | 351 1610 | 651 1794 | P.O.Box 39 | Oranjeville | 1995 |
| Mrs | NA | Ludidi | | Head: Community Service | 016 988 | 016 988 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mrs | Alma | Ludidi | Western Vaal Metro Council | | 016 988 | 016 988 | P O Box 3 | Vanderbijlpark | 1960 |
| Mr. | K | luther | Atlas Organic Fertilisers | | 016 362 | 016 362 | P.O.Box 251 | Meyerton | 1960 |
| Mr. | RJ | Mabefu | Vaaldam TRC | | | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Mr. | Albert | Mabhala | Boipatong PMA | | | | | | |
| Clr | E | Mabile | Western Gauteng Service Council | Services Council | | 011 412 | P.O.Box 3 | Carltonville | 2500 |
| Clr. | BP | Maboe | Sasolburg TLC: Ward 11 | | 016 703 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Mr. | Sibusiso | Madlana | Health Dept WVMC | | 016 950 | | P O Box 3 | Vanderbijlpark | 1960 |
| | M | Maharaj | Tanker Service | | 016 860 | 016 860 | P.O.Box 2290 | Vanderbijlpaark | 1900 |
| Mr. | Vishal | Maharaj | Protekon | | 031 361 | 031 361 | | | |
| Clr | Y | Mahata | | Councillor | | | 20570 Zone 14 | Sebokeng | 1982 |
| Mr. | Pule | Mahonko | United Democratic Front | | | | 61 Alberght St | Sasolburg | 9570 |
| Ms | M | Makoa | DACEL , | Environmental Assessment | 011-355 | 011 355 | P.O. Box 8769 | Johannesburg | 200 |
| Clr. | MK | Makume | Sasolburg TLC: | ANC- Member of the Exec. | 016 976 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Clr | TT | Maleka | | Member of Executive | 016 451 36 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Ms | Cathrine | Maloa | Iscor IVS | | 016 889 | 016 889 | | | |
| Clr | TS | Maloka | | Councillor | 016 427 | 016 427 | P.O.Box 79 | Masoheng | 1908 |
| Clr | JH | Maloka | | Ward Councillor | 016 421 | 016 421 | 81 Max Road | Evarton | 1984 |
| Mr. | J | Mann | Air Products | | 016 860 | 016 860 | P.O.Box 3595 | Vanderbijlpaark | 1900 |
| Mr. | DB | Manoto | Heilbron TLC | | | | P.O.Box 45 | Heilbron | 9650 |
| Clr. | RJK | Manoto | Sasolburg TLC: ward 12 | | 016 976 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| | Aviva | Manqua | | Public Relations and | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | | Manzi | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | ZK | Maphosa | | Chief Executive Officer: Town | 016 660 | 016 660 | P.O.Box 555 | Randvaal | 1873 |
| Mr. | Francois | Marais | Francis Marais and Associates | | 012 889 | 012 889 | | | |
| Mr. | Robert | Marais | Rand Water | | | | | | |
| Mr. | J | Mareka | Viljoenskroon/ Rammulotsi | | 056 343 | 056 343 | P/Bag X 02 | Viljoenskroon | 9520 |

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Post Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mr. | John | Markwets | Rand Water | | | | | | |
| Mr. | LA | Maruma | Vredefort TLC | | 056 931 | 056 931 | P.O.Box 16 | Vredefort | 9595 |
| Mr. | Ellias | Mashilo | Assistant Bestuurder: Vaste-Afval: Stedelike Ontwikkeling | | 011 820 4000 | 011 820 4011 | P/Bag X 1069 | Germiston | 1400 |
| Clr | MP | Matase | Western Gauteng Services Council | | | 011 412 | 623 Hullett Str | Bekkersdal | 1780 |
| Mr. | Knowled | Matsepe | RWWT - BEWG | | | | | | |
| Mr. | S | Matsepo | Councillor | | 016 989 | 011 412 | | | |
| Clr | FL | Matshikiza | Western Gauteng Services | Services Council | 011 414 | 011 412 | P.O.Box 820 | Randfontein | 1740 |
| Mr. | SI | Mbalo | Parys TLC | | 056 821 | 056 876 | P.O.Box 359 | Parys | 9585 |
| Clr | N P | Mbatha | | Councillor | | | 489 Bates Road | Evaton Residense | 1980 |
| Mr. | T | McCarthy | Flexi-Lube | | 016 362 | 016 362 | P.O.Box 1183 | Meyerton | 1960 |
| Mr. | B | McCourt | DACEL | Environmental Assessment | 011 355 | 011 355 | P.O. Box 8769 | Johannesburg | 200 |
| Mr. | R | McMartin | | | | | | | |
| Mr. | JS | Melane | Koppies : | Chief Executive Officer | 056 771 | 056 772 | P.O.Box 14 | Koppies | 9540 |
| Clr | TS | Meopadira | | Member of Executive | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | LJ | Meyer | | Ward Councillor :2 | 016 881 | 016 421 | 4 Claredon Ave | Peaceshaven | 1939 |
| Clr | ML | Milani | | Ward Councillor :3 | 016 422 | 016 421 | 21 Brandmuller | Three Rivers | 1935 |
| Clr. | BT | Mjikane | Sasolburg TLC: | Ward & also Deputy Chairman | 016 976 | 016 973 | 1271 Mzilikazi Str | Zamdela | 9571 |
| Mr. | TL | Mkaza | | Chief Executive Officer | 016 450 | 016 | P.O.Box 471 | Vereeninging | 1930 |
| Mr. | T | Mkhaza | Lekoa Vaal Metro Council | | | | P O Box 35 | Vereeniging | 1930 |
| Mr. | L | Mngomezul | | Chief Executive Officer-Acting | 016 450 | 016 421 | P.O.Box 35 | Vereeninging | 1930 |
| Mr. | Gedion | Mnywabe | Boipatong PMA | | | | | | |
| Clr | MJ | Mofokeng | | Ward Counillor :17 | 016 593 | 016 421 | 9376 Hlakubele | Sebokeng | 1983 |
| Clr | CL | Mofokeng | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | MS | Mofokeng | | Member of Executive | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | LB | Mofokosi | Tweeling | Chief Executive Officer | 058 88364 | 058 | P.O.Box 95 | Tweeling | 9820 |
| Mr. | SJ | Mogorosi | Vaaldam IRC | | | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Clr | K | Mogotsi | | Councillor | | | 19460 Zone 14 | Sebokeng | 1982 |
| Clr | J | Mohao | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | MJ | Mohlakoan | | Chief Executive Officer-Acting | 011 412 | 011 412 | P/Bag X 033 | Randfontein | 1760 |
| Clr | SE | Mokale | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | A | Mokale | | Ward Councillor :11 | 016 851 | 016 421 | P.O.Box 35 | Vereeninging | 1930 |
| Ms | Lindiwe | Mokgokon | Ken Smith Environmentalists | | 012 347 | 012 347 | | | |
| Mr. | PP | Mokgunwa | Kroonkop TRC | | | | Smit,Kruger & | Kroonstad | 9500 |
| Clr | C J | Mokoto | | Councillor | | | 2774 Daytona | Beverley Hills | 1984 |
| Mr. | Tshidiso | Molefe | BBDO | | | | | | |
| Mr. | B | Molotsi | NFSDC | Chief Executive Officer | 016 976 | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Clr. | PZ | Mona | Sasolburg TLC: ANC | | | | 5611 Chris Hani | Zamdela | 9571 |
| Mr. | Victor | Mongwe | DWAF | | 015 290 | 015 295 | P/Bag X9506 | Pietersburg | 700 |
| Clr | AT | Monnakgot | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Ms | J | Moodley | Group for Environmental Monitoring | | 011 403 | 011 403 | P.O.Box 30684 | Braamfontein | 2017 |
| Mr. | A | Morrison | Nampak- Foodcan | | 016 950 | 016 950 | P.O.Box 3388 | Vanderbijlpaark | 1900 |
| Mr. | Reginald | Mositsa | RWWT - BEWG | | | 016 988 | | | |
| Clr | LE | Motaung | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | | Motaung | | | 011 820 | 011 820 | P\Bag X 1069 | Germiston | 1400 |
| Mr. | E | Motaung | Deneysville\ Refengkgotso TLC | ngkgotso TLCI | 016 371 | 016 371 | P.O. Box 16 | Deneysville | 1932 |
| Clr | ZM | Motaung | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | SO | Motingoa | Western Gauteng Service Council | Services Council | 011 951 | 011 412 | P.O.Box 94 | Krugersdorp | 1740 |
| Clr | MC | Motloung | | Ward Councillor :13 | 016 593 | 016 421 | 410 Zone 6, 1 | Sebokeng | 1984 |
| Mr. | Johnny | Mpembe | Sasolburg Unemployment Forum | | 016 974 | | 257 | Zamdela | 9571 |
| Mr. | Moses | Msibi | Boipatong Environmental Club | Chairman of Boipatong EM | | | | | |

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Post Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mrs | P | Mtembu | Concerned Residents | | | | Hostel 159 | Viva Park, | 9571 |
| Ms | Ntombi | Mtimkulu | BEC - BEWG | | | | | | |
| Mr. | Andries | Mtimkulu | BEC - BEWG | | | | | | |
| Mr. | Albert | Mtshale | Boipatong PMA | | | | | | |
| Mr. | Jasper | Muller | Jasper Muller and Associates | | 013 665 | 013 665 | | | |
| Mr. | CA | Muller | Vaaldam TRC | | | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Mrs | Riana | Munnik | DWAF | | 012 672 | 012 672 | | | |
| Mr. | B | Murphy | | Acting Engineer | 016 660 | 016 660 | P.O.Box 555 | Randvaal | 1873 |
| Mr. | Sithonga | Myundla | CHC - BEWG | | | | | | |
| Mr. | Pieter | Myburgh | Iscor IVS | | 016 889 | 016 889 | | | |
| Clr. | MJ | Ndaba | Sasolburg TLC | Mayor | 016 974 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Clr | NC | Ndima | | Ward Councillor: 15 | 016 450 | 016 421 | P.O.Box 35 | Vereeninging | 1930 |
| Mr. | G | Nene | Waste Removal | | 011 680 | 011 609 | P.O.Box 214 | Mondeo | 2110 |
| Mr. | C | Netshivhal | | Engineering Service -Acting | 016 427 | 016 427 | P.O.Box 471 | Vereeninging | 1930 |
| Clr. | DF | Ngubane | Sasolburg TLC : ANC | | 016 974 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Mr. | George | Ngubeni | Boipatong PMA | | | | | | |
| Mr. | Nick | Nicholas | Emfuleni Local Metro Council | | 016 | 016 988 | | | |
| Clr. | JJ | Nieman | Sasolburg TLC : NP | | 016 | 016 973 | 11 Retiefstreet | Sasolburg | 9570 |
| Mr. | MJ | Niemand | Natref | | 016 940 | 016 940 | P O Box 234 | Sasolburg | 9570 |
| Mr. | J | Niewoudt | Administrator: South | | 011 411 | 011 412 | P/Bag X 033 | Randfontein | 1760 |
| Clr | NKA | Nkambule | | Proportional Councillor | | 016 421 | 58006 Zone 3 | Sebokeng | 1983 |
| Mr. | Daniel | Nkoyiyana | Sasolburg Unemployment Forum | | 016 974 | | P O Box 20030 | Zamdela Loc | 9571 |
| | Charl | Nolte | Iscor HQ | | 012 307 | 012 307 | | | |
| Mr. | E | Nortjie | Custaster Steel | | 016 362 | 016 362 | P.O.Box 138 | Meyerton | 1960 |
| Mr. | EM | Notsi | Greater Kroonstad TLC | | 056 269 | 056 269 | C/OP.O.Box 302 | Kroonstad | 9500 |
| Clr | TS | Nquba | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | CA | Nteo | Heilbron TLC | | | | P.O.Box 45 | Heilbron | 9650 |
| Clr | SM | Nthuli | | Ward Councillor: 14 | 016 593 | 016 421 | 76-40 Small Farms | Evaton Residense | 1984 |
| Mr. | NI | Ntombela | Frankfort TLC | | 058 831 | 058 833 | C/O P.O.Box 2 | Frankfort | 9830 |
| Ms | HS | Ntombela | Tweeling TLC | | 058 88 364 | 058 | C/O P.O.Box 95 | Tweeling | 9820 |
| Mr. | MP | Ntshangas | Koppies TLC | | 056 771 | 056 772 | P.O.Box 14 | Koppies | 9540 |
| Ms | Gail | Nussey | DWAF | | | 012 672 | | | |
| Mr. | BJ | Olivier | Dept of Labour - Free State | | 051 505 | 051 447 | P O Box 522 | Bloemfontein | 9300 |
| Mr. | PR | Olivier | Department of Minerals and Energy : Gauteng | | 011 339 4414 | 011 339 1858 | | | |
| Clr. | BK | Oosthuizen | Sasolburg TLC :FF | | 016 976 | 016 973 | 30 Italentistraat | Sasolburg | 9570 |
| Mr. | W | Oosthuizen | USKO Ltd- Aluminium Plants | | 016 450 | 016 423 | P.O.Box 1643 | Vereeniging | 1930 |
| Mr. | K | Otto | Eastern Gauteng Services Council: Urban Development | | 011 820 4228 | 011 820 4011 | P\Bag X 1069 | Germiston | 1400 |
| Mr. | Hennie | Pelser | Local Council | | | | | | |
| Ms | Kavita | Pemma | DWAF | | | 012 672 | | | |
| Clr | FW | Peters | | Proportional Councillor | 011 406 | 016 421 | P.O.Box 18 | Randvall | 1873 |
| Clr | MM | Pellane | | Proportional Councillor | 083 452 | 016 421 | 2 Iriduim North | Steelpark | 1939 |
| Mr. | Njanyan | Phala | CHC - BEWG | | 011 850 | 011 850 | | | |
| Ms | M | Phiri | Health Services | | 016 450 | 016 455 | P.O.Box 471 | Vereeninging | 1930 |
| Mr. | LR | Phiri | Electrode Manufactures of South | | 016 360 | 016 360 | P.O.Box 43 | Meyerton | 1960 |
| Mr. | A | Pieterse | Assistant Bestuurder: Vaste-Afval: Stedelike Ontwikkeling | | 011 820 4000 | 011 820 4011 | P/BagX 1069 | Germiston | 1400 |
| Mrs | Jacqui | Pike | L&W | | 011 254 | 011 805 | P O Box 234 | Sasolburg | 9570 |
| Ms | Miemie | Pitso | SGB - BEWG | | 016 988 | | | | |
| Clr | D | Plaatjie | | Executive Committee SANCO | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Post Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mr. | D | Potgieter | Brollo Africa | | 016 450 | 016 423 | P.O.Box 1905 | Vereeniging | 1930 |
| Mr. | J | Preiss | USKO Ltd - Copper Plant | | 016 450 | 016 454 | P.O.Box 1643 | Vereeniging | 1930 |
| Mr. | Ros | Preforius | Natref | | 016 940 | 016 940 | | | |
| Mrs | Nokwazi | Qongqo | DEAT | | 012 310 | 012 310 | | | |
| Clr | SJ | Radebe | | Ward Councillor: 16 | 016 362 | 016 421 | 139 Evaton North | Evaton Residense | 1984 |
| Mr. | SN | Radebe | Sasolburg: | Head Administration | 016 976 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Clr | JR | Rademeyer | | Ward Councillor | 016 561 | 016 421 | 2 Tulip Street | Rust-Ter- Vaal | |
| Mr. | LJ | Ralebenya | Villiers TLC | | 058 821 | 058 821 | P.O.Box 23 | Villiers | 9840 |
| Mr. | J | Ramokhoas | Parys TLC | | 056 821 | 056 876 | P.O.Box 359 | Parys | 9585 |
| Mrs | P | Ramushu | | Councillor | 016 660 | 016 | P.O.Box 555 | Randvaal | 1873 |
| Clr | RM | Ranoke | | Proportional Councillor | 016 422 | 016 421 | 631 Sheshe | Shalpeville | 1928 |
| Mr. | Geoff | Randall | Petronet | | 031 361 | 031 361 | | | |
| Mr. | TL | Rapoli | Edenville/Ngwathe TLC | | 056 631 | 056 631 | C/O P.O.Box 38 | Edenville | 9535 |
| Mr. | Mike | Reeves | Rand Water | | 011 682 | 011 682 | | | |
| Mr. | AC | Rheeders | Protea Foundry | | 016 860 | 016 860 | P.O.Box 263136 | Three River | 1935 |
| Mr. | R | Riato | Iscor | | 016 889 | 016 889 | P.O.Box 2 | Vanderbijlpaark | 1900 |
| Clr | A | Roberts | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | HJ | Rosenkranz | Samancor | | 016 360 | 016 362 | P.O.Box 66 | Meyerton | 1960 |
| Mr. | G | Rundle | Oorbyl Heavy Engineering Vereeniging Works | | 016-281112 | 016 284 282 | P.O.Box 186 | Vereeniging | 1930 |
| Mr. | Ishmael | Sakoane | Boipatong Environmental Club | Chairman - BEC | 016 950 | 016 950 | | | |
| Mr. | N | Saydah | Omnia Fertilisers | | 016 976 | 016 976 | P.O.Box 384 | Sasolburg | 9570 |
| Mr. | Chris | Scheppel | Sigma Colliery | | 016 970 | 016 971 | | | |
| Mr. | R | Schindler | Credit Agricol Indoor Sewer | | 011 240 | 011 240 | P.O.Box 61523 | Marshalltown | 2107 |
| Dr. | CB | Schoeman | Planning& Technical Services | Director: | 011 411 | 011 412 | P/Bag X 033 | Randfontein | 1760 |
| Ms | MM | Scholtz | Sasolburg TLC: Ward 6 | | 016 973 | 016 973 | 10 Tropsch Str | Sasolburg | 9570 |
| Mr. | C | Scholtz | Sasol Chemical Industries | | 016 960 | 016 960 | P.O.Box 01 | Sasolburg | 9570 |
| Mr. | CJ | Schutte | Kroonkop TRC | | | 056 251 | P.O.Box 1141 | Kroonstad | 9500 |
| Mr. | | Schütte | Union Mineral Recoveries (Pty ) Ltd | | 016 455 | 016 455 | 22 Zambesi Str | Vereeniging | 1930 |
| Clr. | SMD | Sebahole | Sasolburg TLC: Ward 10 | | 016 974 | 016 973 | 1260 Mzilikazi | Zamdela | 9571 |
| Clr | AM | Sebitlelo | | Propartional Councillor | 016 581 09 | 016 421 | 1574 Mbale Str | Palm Springs | 1984 |
| Mr. | Oeven | Seeban | Petronet | | 031 361 | 031 361 | | | |
| Clr | M | Segelo | | Proportional Councillor | 016 853 | 016 421 | 12 Beaconfield | Vereeninging | 1928 |
| Mr. | PM | Sello | Koppies TLC | | 056 771 | 056 772 | P.O.Box 14 | Koppies | 9540 |
| Mrs | S | Sellschop | SAVE | | 011 646 | 011 646 | | | |
| Clr. | LS | Semonyo | Sasolburg TLC: Ward 9&Chair of the Executive Comm | | | 016 973 2191 | 6655 Ext 3 | Zamdela | 9571 |
| Ms | Felicity | Setsedi | SANCO | | 016 988 | | | | |
| Mr. | J | Sewell | Slagment (Pty) Ltd | | 016 | 016 860 | P.O.Box 18 | Vanderbijlpaark | 1900 |
| Mr. | R | Sherman | Earthlife Africa | | 011 837 | 011 837 | P.O.Box 63535 | Marshalltown | 2107 |
| Ms | Y | Silimela | Randvaal | Town Planner | 011 820 | 011 820 | P.O. Box 555 | Randvaal | 1873 |
| Ms | M | Simon | Environmental Justice Network | | 011 403 | 011 403 | P.O.Box 32184 | Braamfontein | 2017 |
| Mr. | Gareth | Simpson | VRF | | 012 362 | | | | |
| Mr. | Phil | Siphengan | Iscor | | 016 889 | 016 889 | | | |
| Mr. | HJW | Small | Natref | | 016 940 | 016 940 | | | |
| Mr. | Gert | Smallberge | Rand Water | | 016 425 | | | Zuikerbosch | |
| Mr. | JR | Smeeton | Atlantic Bronze | | 016 362 | 016 362 | P.O.Box 1190 | Meyerton | 1960 |
| Mr. | T | Smit | Mourik SA | | 016 451 | 016 451 | P.O.Box 1944 | Vereeniging | 1930 |
| Mr. | Ken | Smith | Ken Smith Environmentalists | | 017 826 | 017 826 | P.O. Box 1297 | Piet Retief | 2380 |
| Mr. | HJB | Smith | Rand Water | | 016 421 | 016 421 | P.O.Box 54 | Vereeniging | 1930 |
| Mr. | T | Smith | Tubal Caine Foundry | | 016 422 | 016 422 | P.O.Box 1325 | Vereenlging | 1930 |

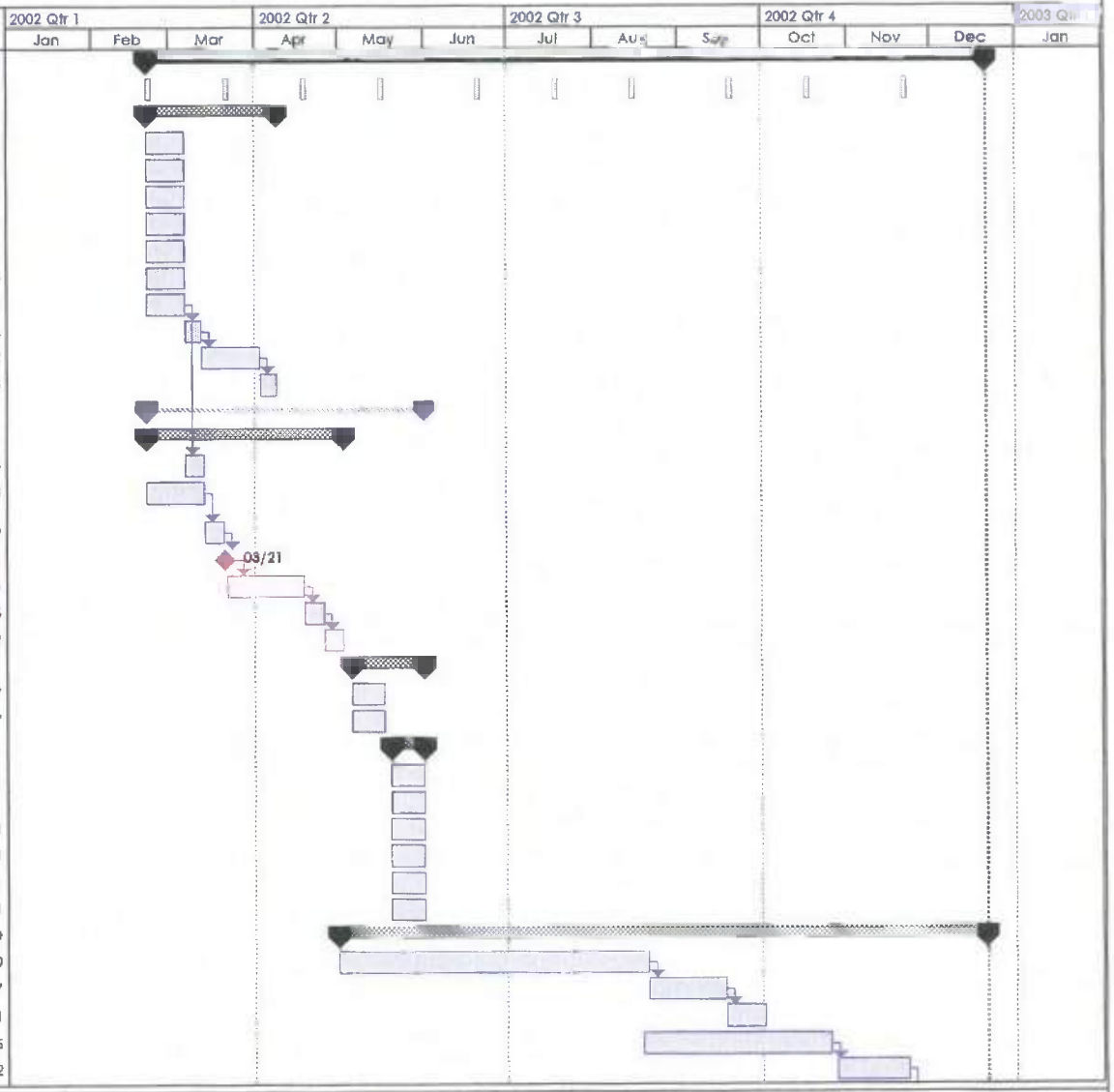
| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Posl Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Mr. | D | Smith | Vanderbilj Hydraulics | | 016 861 | 016 860 | P.O.Box 3608 | Vanderbiljpaark | 1900 |
| Ms | Alta | Snyders | Ken Smith Environmentalists | | 017 826 | 017 826 | | | |
| Ms | A | Snyman | Polifin | | 016 920 | 016 920 | P.O.Box 321 | Sasolburg | 9570 |
| Mr. | G | Solomons | Pichab Testing | | 016 | 016 451 | P O Box 4206 | Vereeniging | 1930 |
| Clr | A | Sophingisa | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Dr. | Q | Spespey | Group for Environmental Monitoring | | 011 403 | 011 403 | P.O.Box 30684 | Braamfontien | 2017 |
| Mr. | AP | Squirra | Town Planning Division | | 016 950 | 016 9 | P.O.Box 3 | Vanderbijlpark | 1900 |
| | J | Stevens | Dept Agric - National Government | | 012 319 | 012 325 | P/Bag X 250 | Pretoria | 0001 |
| Mr. | Albert | Steyn | Iscor IVS | | | | | | |
| Mr. | JW | Steyn | Sasol Technology Environmental | | 016 970 | 016 970 | P.O.Box 01 | Sasolburg | 9570 |
| Mrs | S | Stolberg | Administration | Director | 011 411 | 011 412 | P\Bag X 033 | Randfontein | 1760 |
| Mr. | A | Stoltz | | Councillor | 016 660 | 016 660 | P.O.Box 555 | Randvaal | 1873 |
| Mr. | J | Storm | OSI Africa Project Management | | 011 314 | 011 314 | P O Box 50030 | Randjiesfontein | 1683 |
| Mr. | A | Storr | Vereeniging Refractories | | 016 450 | 016 450 | P.O.Box 117 | Vereeniging | 1930 |
| Mr. | D | Strydom | USKO Ltd - Cable Plant | | 016 450 | 016 423 | P.O.Box 1643 | Vereeniging | 1930 |
| Mr. | NA | Supane | Vaaldam TRC | | | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Mr. | JM | Sutherland | African Products | | 016 362 | 016 362 | P.O.Box 40 | Meyerton | 1960 |
| Mr. | Leon | Swanepoel | Mintek | | 011 709 | 011 709 | P/Bag X3015 | Randburg | 2125 |
| Ms | M | Swift | Earthlife Africa | | 011 837 | 011 837 | P.O.Box 63535 | Marshalltown | 2107 |
| Clr | TJS | Thabane | | Ward Councillor | 016 516 | 016 421 | 2190\1 | Vereeninging | 1928 |
| Mr. | P | Theron | Institute of Waste Management | | 011 782 | 011 782 | P.O.Box 45833 | Rooseveldt Park | 2129 |
| Mr. | LP | Thile | Sasolburg: Health and Housing | | 016 974 | 016 974 | P.O.Box 60 | Sasolburg | 9570 |
| Clr | JP | Thlopane | | Ward Councillor | 016 950 | 016 950 | P.O. Box 3 | Vanderbijlpark | 1900 |
| Mr. | J | Thomson | Superior Casting Suppliers | | 016 422 | 016 421 | P.O.Box 1476 | Vereeniging | 1930 |
| Mr. | AT | Thomson | Elca Engineering (PTY) Ltd | | 016 931 | 016 931 | P.O.Box 607 | Vanderbijlpaark | 1900 |
| Ms | Edith | Tlou | Unemployment Forum | | | | 3968 Taylor park | Zamdela | 9571 |
| Ms | ME | Tshabalala | Kogpel TRC | | | 056 343 | P.O.Box 02 | Viljoenskroon | 9520 |
| Mr. | MJ | Tshabalala | Oranjeville/Metsimaholo TLC | | 351 1610 | 651 1794 | P.O.Box 39 | Oranjeville | 1995 |
| Mr. | JS | Tshabalala | Tweeling TLC | | 058 88364 | 058 | P.O.Box 95 | Tweeling | 9820 |
| Clr | MS | Tshabalala | | Proportional Councillor | 016 591 | 016 421 | 1367 Mabi Ave | Sharpeville | 1928 |
| Clr | PT | Tshabedi | Western Gauteng Service | Services Council | 0142 77 | 011 412 | P.O.Box 2 | Magaliesburg | 2805 |
| Ms | L | Tsimba | Eskom Lethabo Power Station | | 016 420 | 016 420 | P/Bag X 415 | Viljoensdrif | 9580 |
| Mr. | Aaron | Tsoku | DACELL | | 011 355 | 011 337 | | | |
| Mr. | Fortune | Tsotetsi | RWWT - BEWG | | | | | | |
| Mr. | | Tzonev | Sasolburg TLC | City Engineer | 016 976 | 016 973 | P.O.Box 60 | Sasolburg | 9570 |
| Mr. | IP | van den | | Town Engineer | 016 362 | 016 362 | P.O.Box 35 | Vereeninging | 1930 |
| Mr. | DG | van den | NFSDC | Head Administration | 016 976 | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Mr. | P | van den | Iscor:Vanderbijlpark Works | Environmental Manager | 016 889 | 016 889 | P.O.Box 2 | Vanderbijlpaark | 1900 |
| Clr | TS | van den | | Ward Councillor | 016 23 | 016 421 | 25 Weaver Str | Three River East | 1941 |
| Mrs | M | van der | Rural Councils | Chief Environment Officer: | 011 820 | 011 820 | P.O.Box 555 | Randvaal | 1873 |
| Mr. | Patrick | Van der | Iscor IVS | | 016 889 | 016 889 | | | |
| | | Van Der | Dept Transport & Public Works | National Government | 011 355 | 011 355 | P/Bag X 83 | Marshalltown | 2107 |
| Dr. | J | van der | DWAF | | 051 430 | 051 430 | P.O.Box 528 | Bloemfontien | 9300 |
| Mr. | | van der | | Town Engineer | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | | van der | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | JP | van der | Western Gauteng Service Council | Services Council | 016 873 | 011 412 | Vaaloewer | Vanderbijlpark | 1900 |
| | D | van der | Vaal Vacuum Service | | 016 422 | 016 422 | P.O.Box 1998 | Vereeniging | 1930 |
| Mr. | J | van der | Tanker Service | | 016 860 | 016 860 | P.O.Box 2290 | Vanderbijlpaark | 1900 |
| Mr. | H. | Van der | West Vaal Metro Council | | 016 950 | 016 950 | P O Box 3 | Vanderbijlpark | 1900 |
| Mr. | Riaan | van der | Anglo American | | 016 450 | 016 455 | | | |
| | HJ | van der | Sastech R&D | | 016 960 | 016 960 | P.O.Box 01 | Sasolburg | 9570 |
| Ms | Retha | van der | L&W | | 011 254 | 011 805 | | | |

| Title | Name | Surname | Organization | Function | Tel Number | Fax Number | Post Box | Town | Code |
|---|---|---|---|---|---|---|---|---|---|
| Ms | L | van Dyk | | | | | | | |
| | S | van Dyk | Karbochem | | 016 970 | 016 970 | P.O.Box 19 | Sasolburg | 9570 |
| Mr. | Pieter | Van Eeden | Iscor IVS | | 016 889 | 016 889 | | | |
| Mr. | G | van | USKO Ltd - Steelwire Plant | | 016 450 | 016 423 | P.O.Box 1643 | Vereeniging | 1930 |
| Mr. | J | van | Cargo Carriers (Pty) Ltd | | | 016 976 | P O Box 2489 | Sasolburg | 9570 |
| Mr. | G | van Rensburg | Department of Housing and Land Affairs : Gauteng | | 011 355 4724 | 011 838 2904 | P/Bag X 79 | Marshalltown | 2107 |
| Clr | | van | | Member of Executive | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | ### |
| Ms | D | van | Universal Recycling | | 011 474 | 011 474 | P.O.Box 43584 | Industria | 2042 |
| Mr. | Chris | Van | VRF | | 012 362 | 012 362 | | | |
| Mr. | Andre | van Tonder | Gauteng Nature Conservation | | 012 303 | 012 303 | P/Bag X 209 | Pretoria | 1 |
| Mr. | DJ | van Tonder | Sasol Mining | | 017 614 | 017 614 | P/Bag X1015 | Seander | 2302 |
| Mr. | JLJ | van Vuuren | Frankfort | Chief Executive Officer | 058 831 | 058 833 | C/O P.O.Box 2 | Frankfort | 9830 |
| Mr. | J | van Vuuren | Iscor | | 016 889 | 016 889 | P.O.Box 2 | Vanderbijlpaark | 1900 |
| Mr. | J | van Wyk | Karbochem | | 016 970 | 016 970 | P.O.Box 19 | Sasolburg | 9570 |
| | Veolan | van Wyk | Petronet | | 031 361 | 031 361 | | | |
| Clr. | Z | van Zyl | Sasolburg TLC: Ward 5 | Also member of Executive | 016 976 | 016 973 | 22 Baddrif Str | Sasolburg | 9570 |
| Mr. | J | van Zyl | Safripol | | 016 970 | 016 976 | P.O.Box 700 | Sasolburg | 9570 |
| Mr. | Chris | Venter | Iscor IVS | | | | | | |
| Mr. | HL | Venter | Koapel TRC | | | | Municipal Offices | Viljoenskroon | 9520 |
| Clr | MC | Venter | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | LJ | Venter | | Ward Councillor | 016 950 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Clr | AJ | Venter | | Ward Councillor:10 | 016 851 | 016 421 | Taurus Men | Vereeninging | 1930 |
| Mr. | Mike | Vermaak | | | | | | | |
| Mr. | AP | Viljoen | Vaaldam TRC | | 058 832 | 016 976 | P.O.Box 10 | Sasolburg | 9570 |
| Dr. | C | Viljoen | | | | | | | |
| Mr. | G | Visser | Iscor Steel Flat Products | | 016 889 | 016 889 | P.O.Box 2 | Vanderbijlpaark | 1900 |
| Mr. | Oscar | Volkwyn | Natref | | 016 940 | 016 940 | P O Box 234 | Sasolburg | 9570 |
| Mr. | Johan | Vorster | Uitvoerende Bustuurder:Stedelike ontwikkeling | | 011 820 4000 | 011 820 4011 | P/Bag X 1069 | Germiston | 1400 |
| Clr | FN | Vundisa | | Proportional Councillor | 016 593 | 016 421 | 55304 Zone3 | Residensia | 984 |
| Mr. | William | Warrior | Rand Water | | 016 425 | | | Zuikerbosch | |
| Mrs | Thea | Weeks | L&W | | | 011 805 | | | |
| Mr. | L | Wentzel | Van Leer | | 016 988 | 016 988 | P.O.Box 271 | Vanderbijlpaark | 1900 |
| Mrs | M | Werger | | | 016 660 | 016 660 | P.O.Box 555 | Randvaal | 1873 |
| Mr. | A | Wilcocks | Inter- Waste | | 011 792 | 011 792 | | | |
| Mr. | AJ | Wittaker | SAVE | | 011477 | 011 477 | P O Box 130106 | Bryanston | 2021 |
| Mr. | R | Worthingto | Earthlife Africa | | 011 837 | 011 837 | P.O.Box 63535 | Marshalltown | 2107 |
| Ms | Y | Young | Waste tech | | 011 456 | 011 453 | P.O.Box 232 | Bedfordview | 2008 |
| Clr | GM | Zwarts | Ward Councillor | | 016 932 | 016 950 | P.O.Box 3 | Vanderbijlpark | 1900 |
| Mr. | | | Moolmans Attorneys Incorporated | | 011 483 | 011 483 | | | |

# Appendix B: Public Participation Process - Master Plan Phase

# IFSP PERMITTING PROCESS - STAKEHOLDER PARTICIPATION

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 0 | **IFSP Authorization Process - Stakeholder Participation** | 217d | Feb 21 | Dec 20 |
| 1 | **Project Meetings** | 197d | Feb 21 | Nov 22 |
| 12 | **Evaluate & prioritise the "permit" requirements** | 33d | Feb 21 | Apr 08 |
| 13 | Review the Site Selection process - CRMF | 10d | Feb 21 | Mar 06 |
| 14 | Review the ZED process | 10d | Feb 21 | Mar 06 |
| 15 | Review the Coke Oven gas & water cleaning process | 10d | Feb 21 | Mar 06 |
| 16 | Review the 10% Sinter Pilot Plant process ("Australian Tech.") | 10d | Feb 21 | Mar 06 |
| 17 | Review the Blast Furnace Upgrade permitting process | 10d | Feb 21 | Mar 06 |
| 18 | Review an other permitting process | 10d | Feb 21 | Mar 06 |
| 19 | Review an other permitting process | 10d | Feb 21 | Mar 06 |
| 20 | Strategise the Permiting process(es) | 4d | Mar 07 | Mar 12 |
| 21 | Scan IAP's - components / cells | 15d | Mar 13 | Apr 02 |
| 22 | Comunication Protocol - revise and apply | 4d | Apr 03 | Apr 08 |
| 23 | **Plan of Study - Scoping** | 72d | Feb 21 | May 31 |
| 24 | **Lead Authorities' Scoping (DACEL)** | 51d | Feb 21 | May 02 |
| 25 | Integrated Pre-Application consultation with G-DACEL | 5d | Mar 07 | Mar 13 |
| 26 | Provisional ID - issues & alternatives (sites, processes, mitigation measures) | 15d | Feb 21 | Mar 13 |
| 27 | Compile Report - Plan of Study | 5d | Mar 14 | Mar 20 |
| 28 | Submit Report to Authorities | 1d | Mar 21 | Mar 21 |
| 29 | Authority Review | 20d | Mar 22 | Apr 18 |
| 30 | Incorporate comments | 5d | Apr 19 | Apr 25 |
| 31 | Approval by Authorities | 5d | Apr 26 | May 02 |
| 32 | **Stakeholder Scoping** | 20d | May 06 | May 31 |
| 33 | Competant Authorities (DACEL, DEAT DWAF) | 10d | May 06 | May 17 |
| 34 | Commenting Authorities (Sedibeng, Emfuleni, Prov. Dept. Health) | 10d | May 06 | May 17 |
| 35 | Cell meetings (by sector) - first round | 10d | May 20 | May 31 |
| 36 | East - Bolpetong | 10d | May 20 | May 31 |
| 37 | South - Vanderbijlpark | 10d | May 20 | May 31 |
| 38 | South-west - Bophelong | 10d | May 20 | May 31 |
| 39 | West - Potentially Affected Parties | 10d | May 20 | May 31 |
| 40 | West - Potentially Interested Parties / Complex | 10d | May 20 | May 31 |
| 41 | North - Sebokeng + other institutions | 10d | May 20 | May 31 |
| 42 | **Geohydrological Investigations - 2 candiate sites** | 168d | May 01 | Dec 20 |
| 43 | Baseline Studies | 80d | May 01 | Aug 20 |
| 44 | Identification of impacts - historic, current & predicted | 20d | Aug 21 | Sep 17 |
| 45 | Description of aspects & impacts | 10d | Sep 18 | Oct 01 |
| 46 | Predictive Modelling | 50d | Aug 19 | Oct 25 |
| 47 | Identification & evaluation of alternatives | 20d | Oct 28 | Nov 22 |




Project: Public Participation
Date: Dec 21
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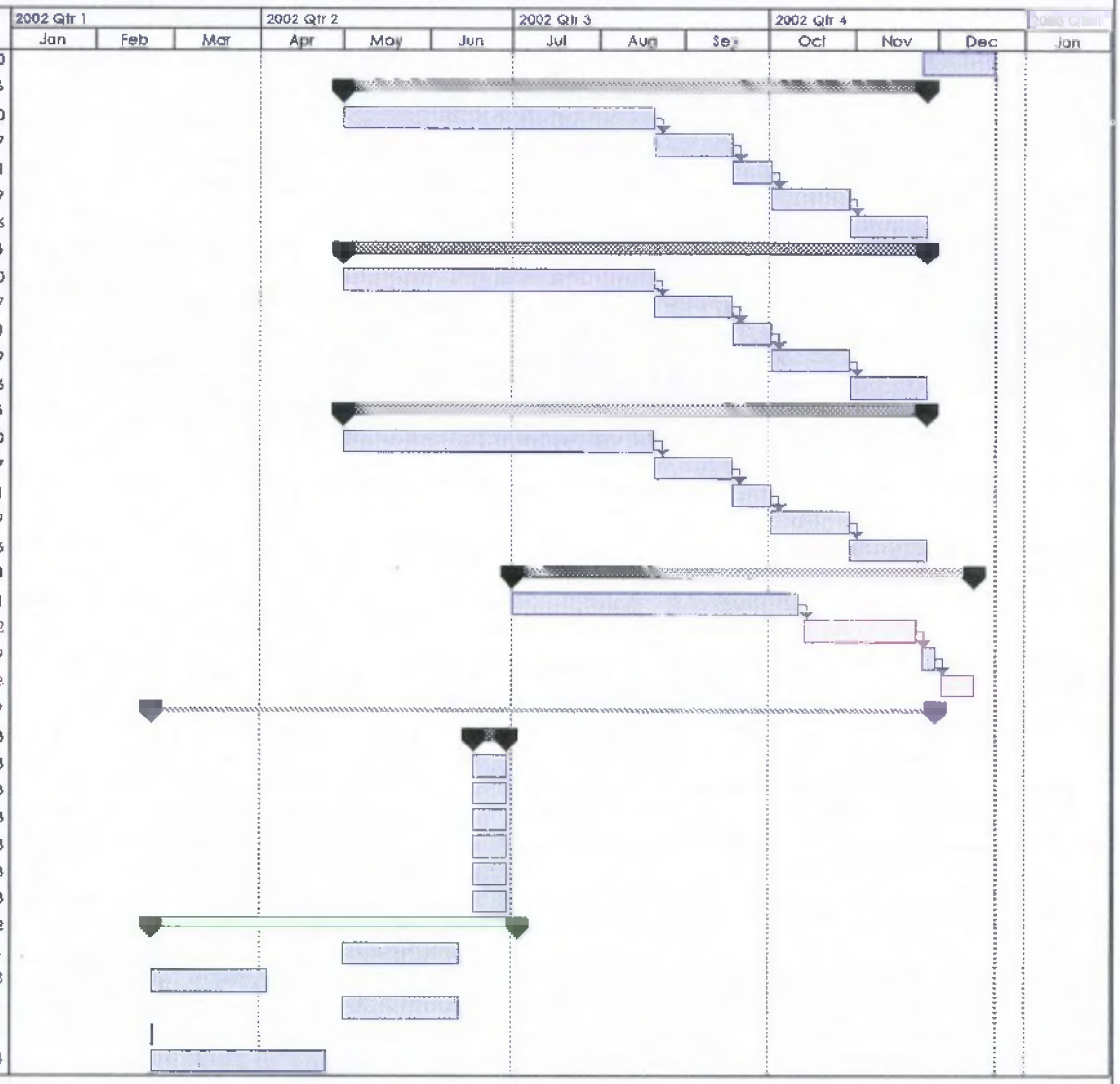
Task | Milestone | Rolled Up Split | External Tasks | Deadline
Split | Summary | Rolled Up Milestone | Project Summary
Progress | Rolled Up Task | Rolled Up Progress | External Milestone

# IFSP PERMITTING PROCESS - STAKEHOLDER PARTICIPATION

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 48 | Motivation of preferred mitigation alternatives | 20d | Nov 25 | Dec 20 |
| 49 | **Geotechnical Investigations** | **150d** | **May 01** | **Nov 26** |
| 50 | Baseline Studies | 80d | May 01 | Aug 20 |
| 51 | Identification of constraints and design criteria | 20d | Aug 21 | Sep 17 |
| 52 | Description of potential aspects & impacts | 10d | Sep 18 | Oct 01 |
| 53 | Identification & evaluation of alternative designs | 20d | Oct 02 | Oct 29 |
| 54 | Motivation of preferred mitigation alternatives | 20d | Oct 30 | Nov 26 |
| 55 | **Hydrological Studies** | **150d** | **May 01** | **Nov 26** |
| 56 | Baseline Studies (quality and flow) | 80d | May 01 | Aug 20 |
| 57 | Identification of impacts - historic & predicted | 20d | Aug 21 | Sep 17 |
| 58 | Description of aspects & impacts | 10d | Sep 18 | Oct 01 |
| 59 | Identification & evaluation of poicon alternatives | 20d | Oct 02 | Oct 29 |
| 60 | Motivation of preferred mitigation alternatives | 20d | Oct 30 | Nov 26 |
| 61 | **Ecological Studies (Sensitive Environments)** | **150d** | **May 01** | **Nov 26** |
| 62 | Baseline Studies | 80d | May 01 | Aug 20 |
| 63 | Identification of impacts - historic & predicted | 20d | Aug 21 | Sep 17 |
| 64 | Description of aspects & impacts | 10d | Sep 18 | Oct 01 |
| 65 | Identification & evaluation of alternatives | 20d | Oct 02 | Oct 29 |
| 66 | Motivation of preferred mitigation alternatives | 20d | Oct 30 | Nov 26 |
| 67 | **Conceptual design H-Class Site** | **120d** | **Jul 01** | **Dec 13** |
| 68 | Conceptual design | 75d | Jul 01 | Oct 11 |
| 69 | Authority (DWAF) Review | 30d | Oct 14 | Nov 22 |
| 70 | Incorporate comments | 5d | Nov 25 | Nov 29 |
| 71 | Approval by Authorities (DWAF) | 10d | Dec 02 | Dec 13 |
| 72 | **Scoping Exercise & Report** | **202d** | **Feb 21** | **Nov 29** |
| 73 | Cell meetings (by sector) - second round | 10d | Jun 17 | Jun 28 |
| 74 | East - Balpetong | 10d | Jun 17 | Jun 28 |
| 75 | South - Vanderbijlpark | 10d | Jun 17 | Jun 28 |
| 76 | South-west - Bophelong | 10d | Jun 17 | Jun 28 |
| 77 | West - Potentially Affected Parties | 10d | Jun 17 | Jun 28 |
| 78 | West - Potentially Interested Parties / Complex | 10d | Jun 17 | Jun 28 |
| 79 | North - Sebokeng + other institutions | 10d | Jun 17 | Jun 28 |
| 80 | 1st rnd. Public Partic. - introduction of project | 94d | Feb 21 | Jul 02 |
| 81 | A Farmers / neighbours | 30d | May 01 | Jun 11 |
| 82 | B Downstream water users | 30d | Feb 21 | Apr 03 |
| 83 | C Rietspruit Catchment Forum | 30d | May 01 | Jun 11 |
| 84 | D Local Council Structures | 1d | Feb 21 | Feb 21 |
| 85 | E North | 45d | Feb 21 | Apr 24 |




Project: Public Participation
Date: Dec 21
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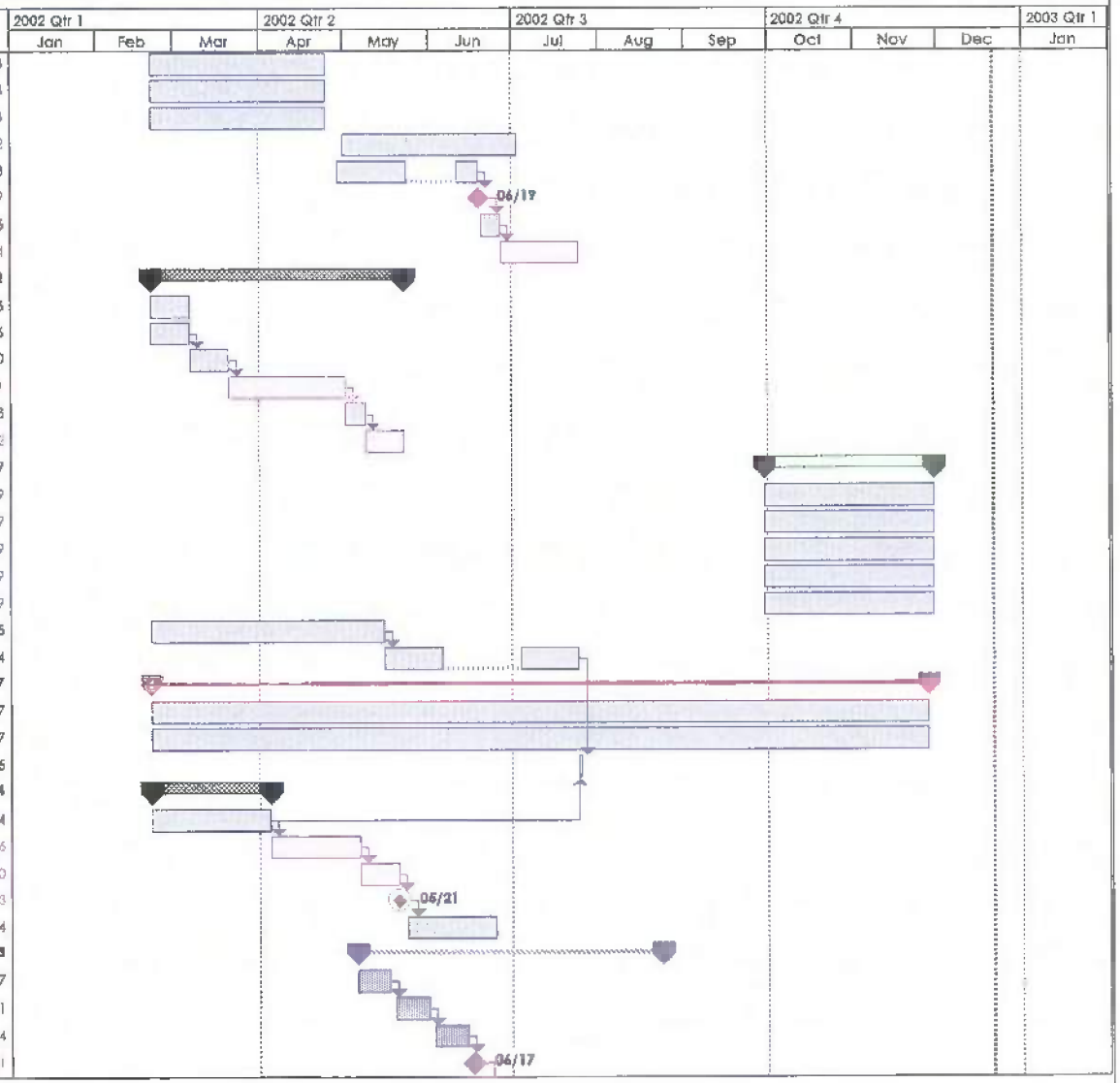
Task | Milestone | Rolled Up Split | External Tasks | Deadline
Split | Summary | Rolled Up Milestone | Project Summary
Progress | Rolled Up Task | Rolled Up Progress | External Milestone

# IFSP Permitting Process - Stakeholder Participation

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 86 | F East | 45d | Feb 21 | Apr 24 |
| 87 | G South | 45d | Feb 21 | Apr 24 |
| 88 | H West | 45d | Feb 21 | Apr 24 |
| 89 | I Industries & CBD | 45d | May 01 | Jul 02 |
| 90 | **Compile Draft Scoping Report** | **37d** | **Apr 29** | **Jun 18** |
| 91 | Submit Scoping Rpt. to Authorities | 1d | Jun 19 | Jun 19 |
| 92 | **Present Scoping Rpt. to Authorities** | **5d** | **Jun 20** | **Jun 26** |
| 93 | Authority Review | 20d | Jun 27 | Jul 24 |
| 94 | **Site Selection Process** | **65d** | **Feb 21** | **May 22** |
| 95 | Ranking and Rating (Landfill Specialists) | 10d | Feb 21 | Mar 06 |
| 96 | 2nd rnd. Stakeholder Consult.n (Ranking & Rating; TOR- EIA) | 10d | Feb 21 | Mar 06 |
| 97 | Site Selection Report | 10d | Mar 07 | Mar 20 |
| 98 | Authority (DWAF) Review + G-DACEL | 30d | Mar 21 | May 01 |
| 99 | Incorporate comments | 5d | May 02 | May 08 |
| 100 | Approval by Authorities (DWAF) | 10d | May 09 | May 22 |
| 101 | **3rd round P.P. - Present Scoping Rpt & Preferred Candidate Site** | **45d** | **Sep 30** | **Nov 29** |
| 102 | A N, S. Industry, CBD, ICF & Firnrs | 45d | Sep 30 | Nov 29 |
| 103 | B North | 45d | Sep 30 | Nov 29 |
| 104 | C South | 45d | Sep 30 | Nov 29 |
| 105 | D East | 45d | Sep 30 | Nov 29 |
| 106 | E West | 45d | Sep 30 | Nov 29 |
| 107 | Specialist & IAP Review | 60d | Feb 21 | May 15 |
| 108 | Incorporate ammendments | 50d | May 16 | Jul 24 |
| 109 | **Rezoning Process (as required)** | **200d** | **Feb 21** | **Nov 27** |
| 110 | Auth. consultation - Rezoning process | 200d | Feb 21 | Nov 27 |
| 111 | DFA / Local by-laws prescribed process | 200d | Feb 21 | Nov 27 |
| 112 | 4th rnd. P.P. - Concensus of Scope | 1d | Jul 25 | Jul 25 |
| 113 | 1st CPM - Introductions & Constitute the RILCOM | 31d | Feb 21 | Apr 04 |
| 114 | Establish RILC | 31d | Feb 21 | Apr 04 |
| 115 | Conditions of approval | 22d | Apr 05 | May 06 |
| 116 | Approval by Authorities | 10d | May 07 | May 20 |
| 117 | 2nd CPM - Issues & Alternatives | 3d | May 21 | May 23 |
| 118 | Consideration of the Application | 22d | May 24 | Jun 24 |
| 119 | **Plan of Study for Env. Impact report** | **80d** | **May 06** | **Aug 25** |
| 120 | Authorities' consultation | 10d | May 06 | May 17 |
| 121 | Specialist Scoping | 10d | May 20 | May 31 |
| 122 | Compile Report | 10d | Jun 03 | Jun 14 |
| 123 | Present Report to Authorities | 5d | Jun 17 | Jun 21 |




Project: Public Participation
Date: Dec 21
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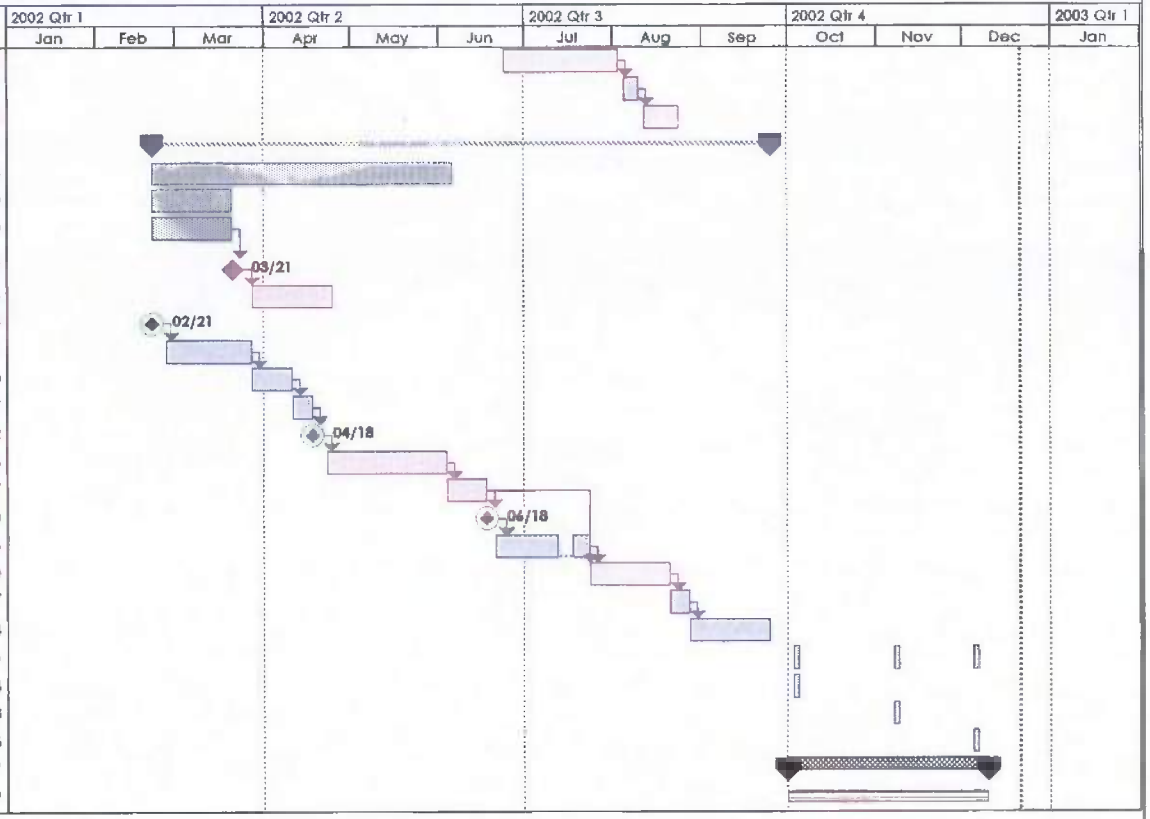
Task | Milestone | Rolled Up Split | External Tasks | Deadline
Split | Summary | Rolled Up Milestone | Project Summary
Progress | Rolled Up Task | Rolled Up Progress | External Milestone

# IFSP Permitting Process - Stakeholder Participation

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 124 | Authority Review | 30d | Jun 24 | Aug 02 |
| 125 | **Incorporate comments** | **5d** | **Aug 05** | **Aug 09** |
| 126 | Approval by Authorities | 10d | Aug 12 | Aug 23 |
| 127 | **Environmental Impact Control Report (EICR) & Permit Application** | **154d** | **Feb 21** | **Sep 24** |
| 128 | Investigate issues/alt.s further | 75d | Feb 21 | Jun 05 |
| 129 | Compile Draft EI Control Report & Permit Application Reports | 20d | Feb 21 | Mar 20 |
| 130 | Draft and present the operating, rehabilitation, closure & monitoring plans | 20d | Feb 21 | Mar 20 |
| 131 | Present Report to Authorities | 5d | Mar 21 | Mar 27 |
| 132 | Authority Review | 20d | Mar 28 | Apr 24 |
| 133 | 3rd CPM - Present Draft EICR | 3d | Feb 21 | Feb 25 |
| 134 | **Specialist & IAP Review** | **22d** | **Feb 26** | **Mar 27** |
| 135 | **Incorporate ammendments** | **10d** | **Mar 28** | **Apr 10** |
| 136 | **Submit revised report to the Authorities** | **5d** | **Apr 11** | **Apr 17** |
| 137 | 4th CPM - Present Revised Report | 3d | Apr 18 | Apr 22 |
| 138 | Conditions of approval | 30d | Apr 23 | Jun 03 |
| 139 | Approval by Authorities | 10d | Jun 04 | Jun 17 |
| 140 | 5th CPM - Obtain Consensus for EICR | 3d | Jun 18 | Jun 20 |
| 141 | Consideration of the Application | 23d | Jun 21 | Jul 23 |
| 142 | Record of Decision - Approval of EICR | 20d | Jul 24 | Aug 20 |
| 143 | **Dissemination of Record of Decision** | **5d** | **Aug 21** | **Aug 27** |
| 144 | **Possible Appeal** | **20d** | **Aug 28** | **Sep 24** |
| 145 | **Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing)** | **47d** | **Oct 03** | **Dec 06** |
| 146 | Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing) 1 | 2d | Oct 03 | Oct 04 |
| 147 | Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing) 2 | 2d | Nov 07 | Nov 08 |
| 148 | Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing) 3 | 2d | Dec 05 | Dec 06 |
| 149 | **Undertake Activity (ongoing)** | **50d** | **Oct 01** | **Dec 09** |
| 150 | Undertake activity | 50d | Oct 01 | Dec 09 |

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Task | Milestone | Rolled Up Split | External Tasks | Deadline
Split | Summary | Rolled Up Milestone | Project Summary
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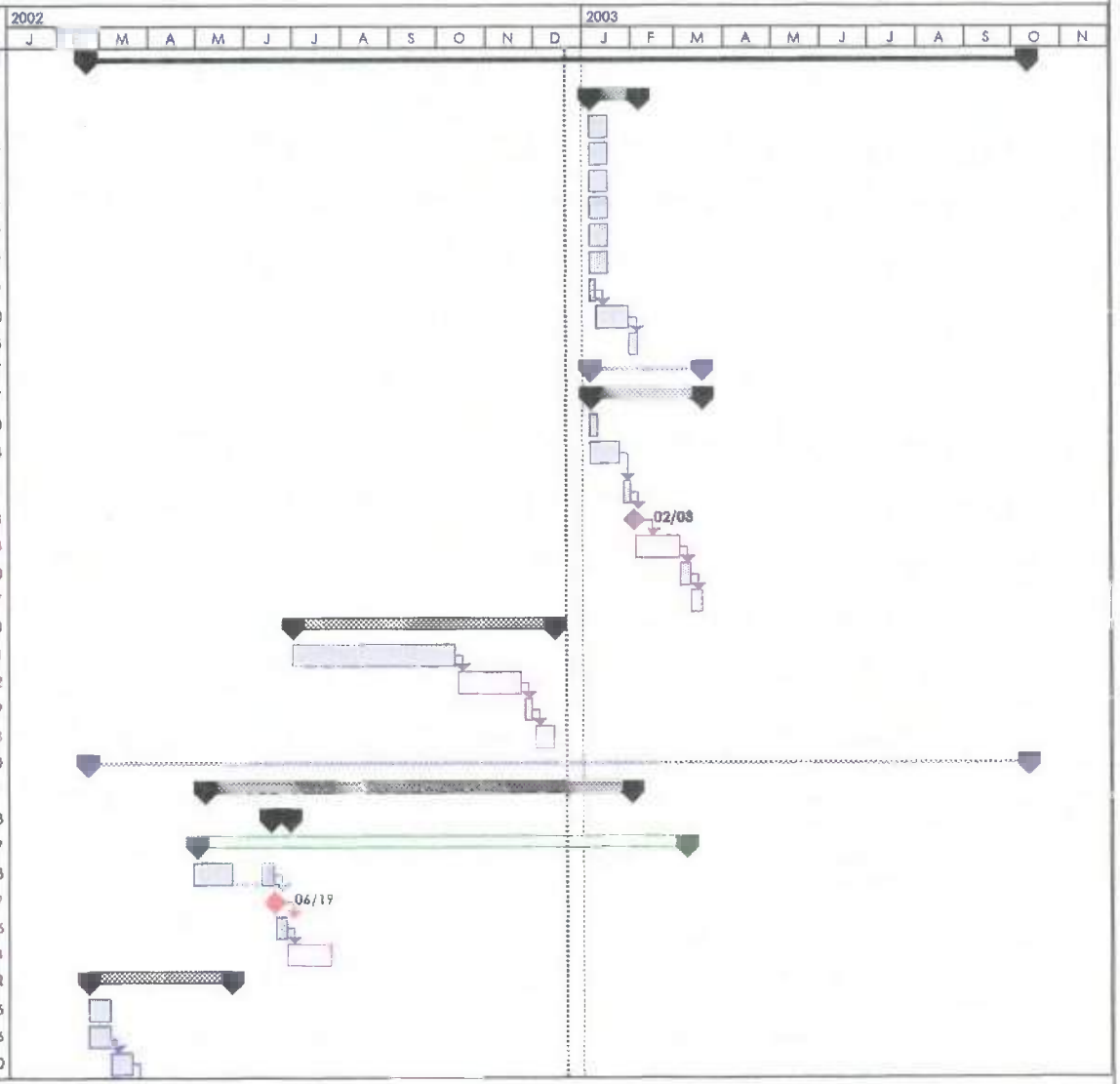
# Appendix C: Public Participation Process - Post Master Plan

# IVS AUTHORIZATION PROCESSES - STAKEHOLDER PARTICIPATION (POST MASTER PLAN)

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 0 | **IVS Authorization Processes - Stakeholder Participation (post Mas** | 427d | Feb 21 | Oct 10 |
| 1 | **Evaluate & prioritise the "permit" requirements** | 23d | Jan 06 | Feb 05 |
| 2 | Review the Site Selection process - CRMF | 10d | Jan 06 | Jan 17 |
| 3 | Review the ZED process | 10d | Jan 06 | Jan 17 |
| 4 | Review the Coke Oven gas & water cleaning process | 10d | Jan 06 | Jan 17 |
| 5 | Review the 10% Sinter Pilot Plant process ("Australian Tech.") | 10d | Jan 06 | Jan 17 |
| 6 | Review the Blast Furnace Upgrade permitting process | 10d | Jan 06 | Jan 17 |
| 7 | Review other permitting processes: dovetail P2 where possible | 10d | Jan 06 | Jan 17 |
| 8 | Strategise the Permiting process(es) | 4d | Jan 06 | Jan 09 |
| 9 | Scan IAP's - components / cells | 15d | Jan 10 | Jan 30 |
| 10 | Comunication Protocol - revise and apply | 4d | Jan 31 | Feb 05 |
| 11 | **Plan of Study - Scoping** | 51d | Jan 06 | Mar 17 |
| 12 | **Lead Authorities' Scoping (DACEL)** | 51d | Jan 06 | Mar 17 |
| 13 | Integrated Pre-Application consultation with G-DACEL | 5d | Jan 06 | Jan 10 |
| 14 | Provisional ID - Issues & alternatives (sites, processes, mitigation measures) | 15d | Jan 06 | Jan 24 |
| 15 | Compile Report - Plan of Study | 5d | Jan 27 | Jan 31 |
| 16 | Submit Report to Authorities | 1d | Feb 03 | Feb 03 |
| 17 | Authority Review | 20d | Feb 04 | Mar 03 |
| 18 | Incorporate comments | 5d | Mar 04 | Mar 10 |
| 19 | Approval by Authorities | 5d | Mar 11 | Mar 17 |
| 20 | **Conceptual design H-Class Site** | 120d | Jul 01 | Dec 13 |
| 21 | Conceptual design | 75d | Jul 01 | Oct 11 |
| 22 | Authority (DWAF) Review | 30d | Oct 14 | Nov 22 |
| 23 | Incorporate comments | 5d | Nov 25 | Nov 29 |
| 24 | Approval by Authorities (DWAF) | 10d | Dec 02 | Dec 13 |
| 25 | **Scoping Exercise & Report** | 427d | Feb 21 | Oct 10 |
| 26 | **Stakeholder Scoping** | 195d | May 06 | Jan 31 |
| 36 | Cell meetings (by sector) | 10d | Jun 17 | Jun 28 |
| 43 | 1st rnd. Public Partic. - Introduction of project | 223d | May 01 | Mar 07 |
| 53 | Compile Draft Scoping Report | 37d | Apr 29 | Jun 18 |
| 54 | Submit Scoping Rpt. to Authorities | 1d | Jun 19 | Jun 19 |
| 55 | Present Scoping Rpt. to Authorities | 5d | Jun 20 | Jun 26 |
| 56 | Authority Review | 20d | Jun 27 | Jul 24 |
| 57 | **Site Selection Process** | 65d | Feb 21 | May 22 |
| 58 | Ranking and Rating (Landfill Specialists) | 10d | Feb 21 | Mar 06 |
| 59 | 2nd rnd. Stakeholder Consult.n (Ranking & Rating; TOR- EIA) | 10d | Feb 21 | Mar 06 |
| 60 | Site Selection Report | 10d | Mar 07 | Mar 20 |

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Task | Milestone | Rolled Up Split | External Tasks | Deadline
Split | Summary | Rolled Up Milestone | Project Summary
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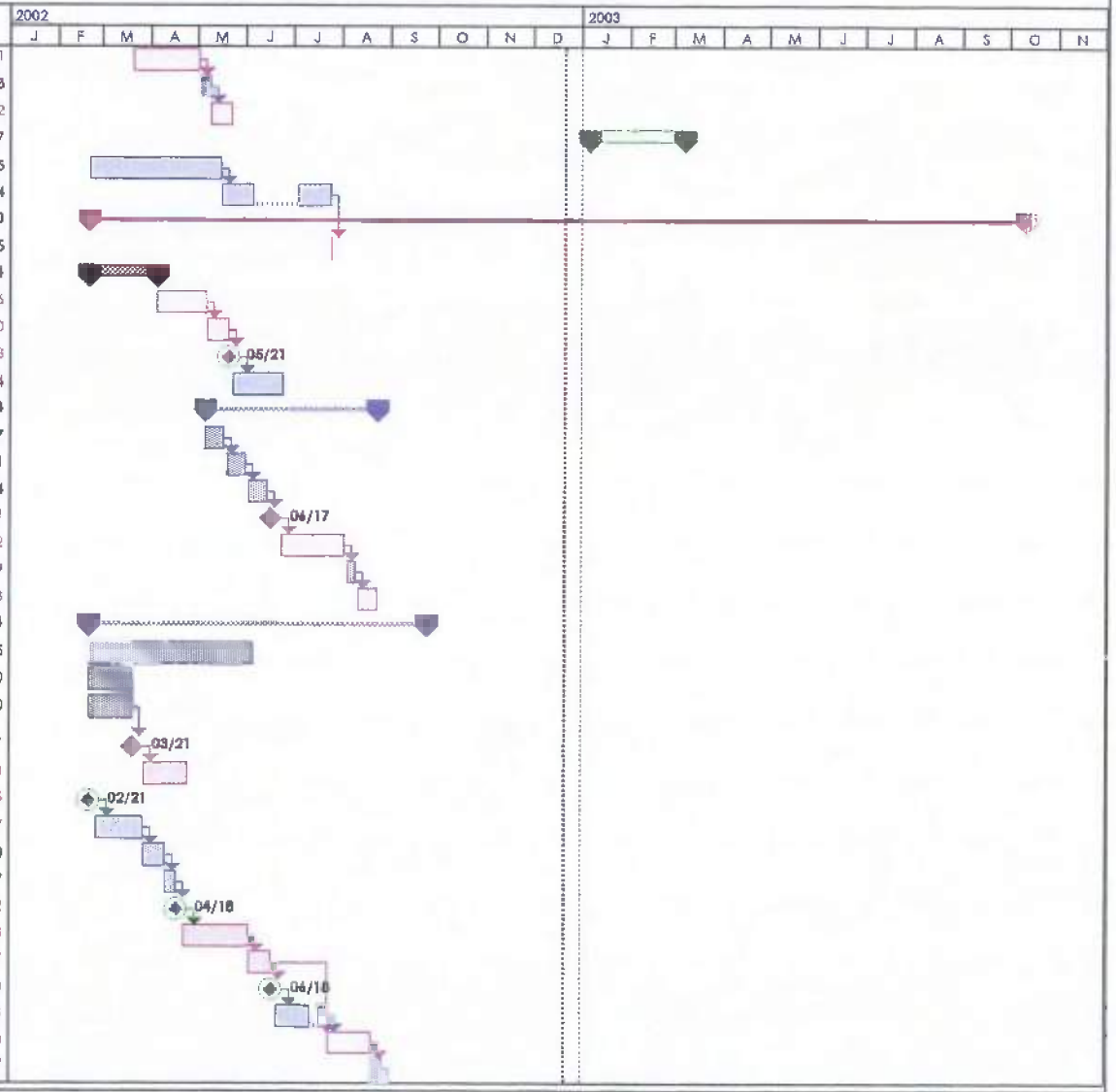
# IVS AUTHORIZATION PROCESSES - STAKEHOLDER PARTICIPATION (POST MASTER PLAN)

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 61 | Authority (DWAF) Review + G-DACEL | 30d | Mar 21 | May 01 |
| 62 | Incorporate comments | 5d | May 02 | May 08 |
| 63 | Approval by Authorities (DWAF) | 10d | May 09 | May 22 |
| 64 | **3rd round P.P. - Present Scoping Rpt & Preferred Candidate Site** | 45d | Jan 06 | Mar 07 |
| 70 | Specialist & IAP Review | 60d | Feb 21 | May 15 |
| 71 | Incorporate ammendments | 50d | May 16 | Jul 24 |
| 72 | **Rezoning Process (as required)** | 427d | Feb 21 | Oct 10 |
| 75 | 4th rnd. P.P. - Concensus of Scope | 1d | Jul 25 | Jul 25 |
| 76 | 1st CPM - Introductions & Constitute the RILCOM | 31d | Feb 21 | Apr 04 |
| 78 | Conditions of approval | 22d | Apr 05 | May 06 |
| 79 | Approval by Authorities | 10d | May 07 | May 20 |
| 80 | 2nd CPM - Issues & Alternatives | 3d | May 21 | May 23 |
| 81 | Consideration of the Application | 22d | May 24 | Jun 24 |
| 82 | **Plan of Study for Env. Impact report** | 80d | May 06 | Aug 28 |
| 83 | Authorities' consultation | 10d | May 06 | May 17 |
| 84 | Specialist Scoping | 10d | May 20 | May 31 |
| 85 | Compile Report | 10d | Jun 03 | Jun 14 |
| 86 | Present Report to Authorities | 5d | Jun 17 | Jun 21 |
| 87 | Authority Review | 30d | Jun 24 | Aug 02 |
| 88 | Incorporate comments | 5d | Aug 05 | Aug 09 |
| 89 | Approval by Authorities | 10d | Aug 12 | Aug 23 |
| 90 | **Environmental Impact Control Report (EICR) & Permit Application** | 154d | Feb 21 | Sep 24 |
| 91 | Investigate Issues/alt.s further | 75d | Feb 21 | Jun 05 |
| 92 | Compile Draft EI Control Report & Permit Application Reports | 20d | Feb 21 | Mar 20 |
| 93 | Draft and present the operating, rehabilitation, closure & monitoring plans | 20d | Feb 21 | Mar 20 |
| 94 | Present Report to Authorities | 5d | Mar 21 | Mar 27 |
| 95 | Authority Review | 20d | Mar 28 | Apr 24 |
| 96 | 3rd CPM - Present Draft EICR | 3d | Feb 21 | Feb 25 |
| 97 | Specialist & IAP Review | 22d | Feb 26 | Mar 27 |
| 98 | Incorporate ammendments | 10d | Mar 28 | Apr 10 |
| 99 | Submit revised report to the Authorities | 5d | Apr 11 | Apr 17 |
| 100 | 4th CPM - Present Revised Report | 3d | Apr 18 | Apr 22 |
| 101 | Conditions of approval | 30d | Apr 23 | Jun 03 |
| 102 | Approval by Authorities | 10d | Jun 04 | Jun 17 |
| 103 | 5th CPM - Obtain Consensus for EICR | 3d | Jun 18 | Jun 20 |
| 104 | Consideration of the Application | 23d | Jun 21 | Jul 23 |
| 105 | Record of Decision - Approval of EICR | 20d | Jul 24 | Aug 20 |
| 106 | Dissemination of Record of Decision | 5d | Aug 21 | Aug 27 |

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Task | Milestone | Rolled Up Split | External Tasks | Deadline
Split | Summary | Rolled Up Milestone | Project Summary
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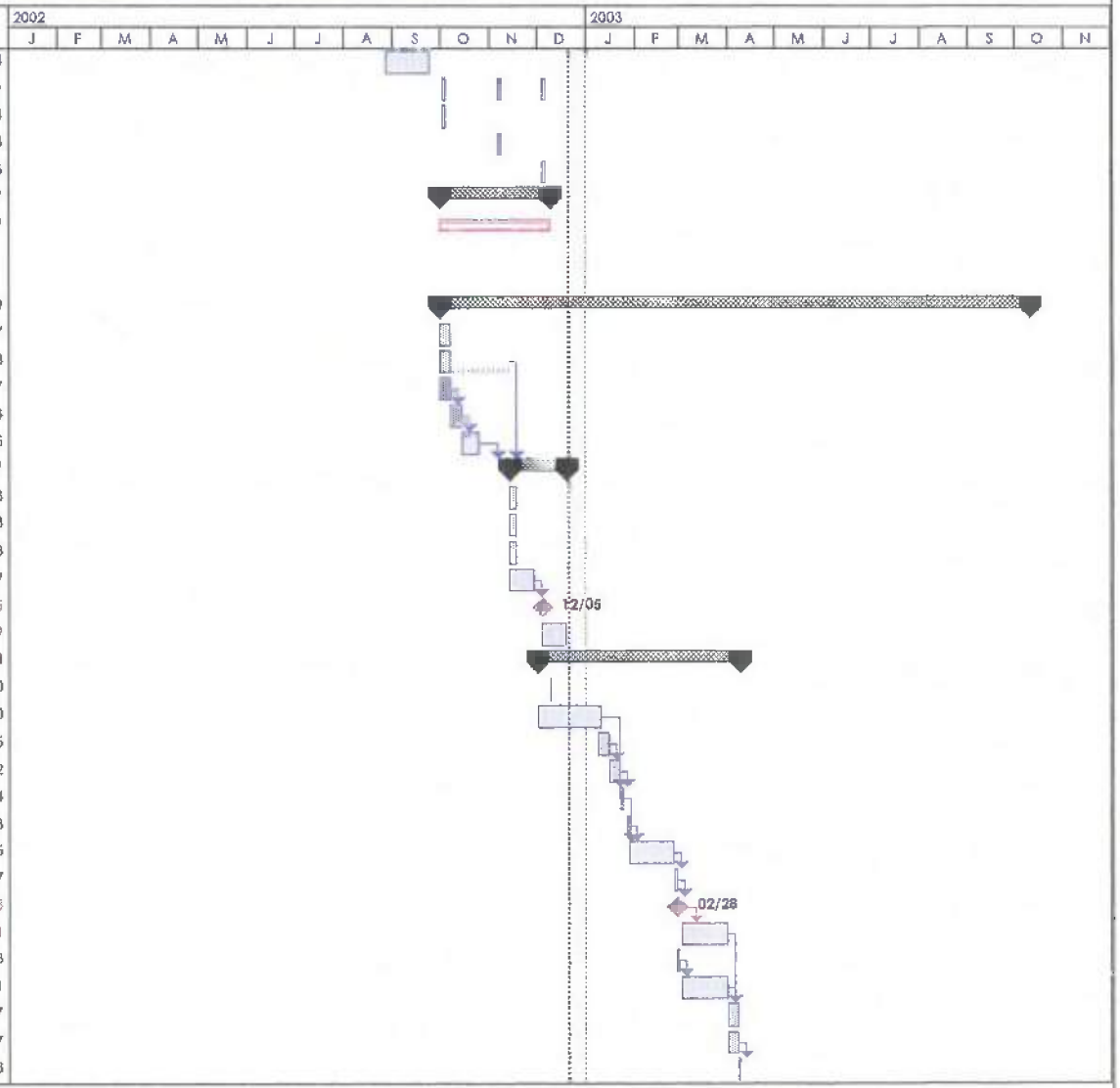
# IVS Authorization Processes - Stakeholder Participation (Post Master Plan)

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 107 | Possible Appeal | 20d | Aug 26 | Sep 24 |
| 108 | **Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing)** | **47d** | **Oct 03** | **Dec 06** |
| 109 | Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing) 1 | 2d | Oct 03 | Oct 04 |
| 110 | Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing) 2 | 2d | Nov 07 | Nov 08 |
| 111 | Rep. IAP Liaison Com. / Social Monitoring Programme (Ongoing) 3 | 2d | Dec 05 | Dec 06 |
| 112 | **Undertake Activity (ongoing)** | **50d** | **Oct 01** | **Dec 09** |
| 113 | Undertake activity | 50d | Oct 01 | Dec 09 |
| 114 | | | | |
| 115 | | | | |
| 116 | **Plan of Study for Scoping - Sinter Demonstration Plant** | **269d** | **Oct 01** | **Oct 10** |
| 117 | Proposal to undertake activity (Jan. '02) | 5d | Oct 01 | Oct 07 |
| 118 | Pre- application consultation- DACEL (Feb. '02) | 5d | Oct 01 | Nov 13 |
| 119 | Submit an application for exemption (Feb. '02) | 5d | Oct 01 | Oct 07 |
| 120 | Application for exemption processed (Feb. '02) | 5d | Oct 08 | Oct 14 |
| 121 | Submit project Registration to DACEL | 9d | Oct 15 | Oct 25 |
| 122 | **Plan of Study for Scoping (PSS)** | **26d** | **Nov 14** | **Dec 19** |
| 123 | Scan IAP's - components / cells | 3d | Nov 14 | Nov 18 |
| 124 | Provisional ID of Issues and Alternatives | 3d | Nov 14 | Nov 18 |
| 125 | Strategise the PP process | 3d | Nov 14 | Nov 18 |
| 126 | Compile Report | 12d | Nov 14 | Nov 29 |
| 127 | Submit PSS Report to Lead Agent | 1d | Dec 05 | Dec 05 |
| 128 | Authority review of PSS | 11d | Dec 05 | Dec 19 |
| 129 | **Scoping Exercise** | **92d** | **Dec 02** | **Apr 08** |
| 130 | Authorities' Site Meeting (optional) | 1d | Dec 10 | Dec 10 |
| 131 | Compile draft Scoping Report | 30d | Dec 02 | Jan 10 |
| 132 | Place notice in press | 5d | Jan 09 | Jan 15 |
| 133 | Distribute the BID to key Stakeholders & Authorities | 5d | Jan 16 | Jan 22 |
| 134 | Submit draft Scoping Report to Authorities | 2d | Jan 23 | Jan 24 |
| 135 | Present draft Scoping Report at Public Meeting | 2d | Jan 27 | Jan 28 |
| 136 | Receive response to draft report | 20d | Jan 29 | Feb 25 |
| 137 | Edit the Scoping Report (incl. EMP for issues & alt.s) | 2d | Feb 26 | Feb 27 |
| 138 | Submit Report to Authorities | 1d | Feb 28 | Feb 28 |
| 139 | Authority Review | 21d | Mar 03 | Mar 31 |
| 140 | Distribute Scoping Report to key Stakeholders | 1d | Feb 28 | Feb 28 |
| 141 | Specialists & IAP's review | 21d | Mar 03 | Mar 31 |
| 142 | Record any further issues & level of consensus | 5d | Apr 01 | Apr 07 |
| 143 | Finalise Scoping Report (incl. EMP for issues & alt.s) | 5d | Apr 01 | Apr 07 |
| 144 | Submit to Authorities the Scoping Report incl. an EMP, Issues & Response report | 1d | Apr 08 | Apr 08 |

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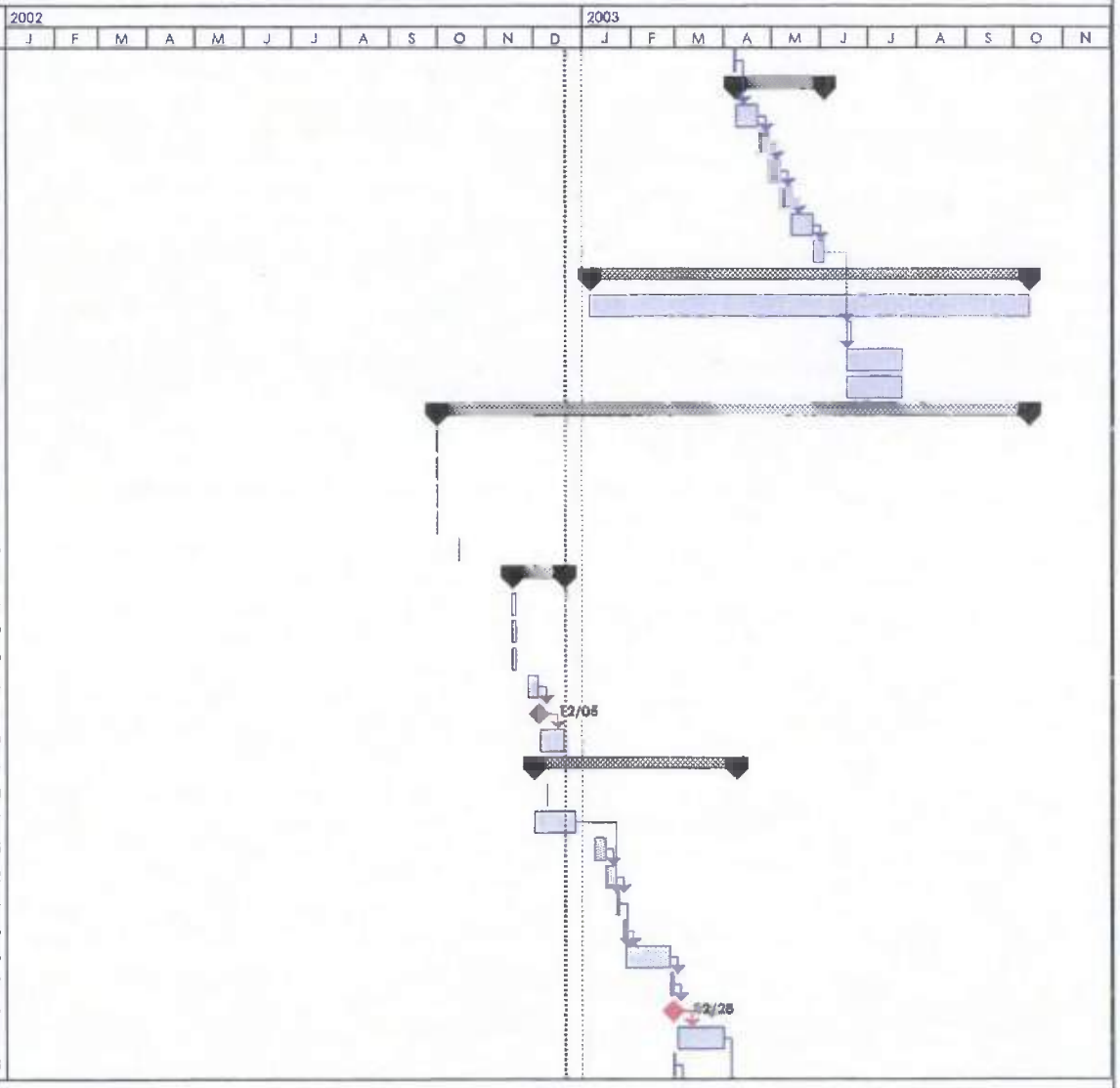
# IVS Authorization Processes - Stakeholder Participation (Post Master Plan)

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 145 | Make available to IAP's, the Scoping Report incl. an EMP, Issues & Response rep | 1d | Apr 08 | Apr 08 |
| 146 | **Decision-making process** | **40d** | **Apr 09** | **Jun 03** |
| 147 | Authority review | 10d | Apr 09 | Apr 22 |
| 148 | Conditions of approval | 5d | Apr 23 | Apr 29 |
| 149 | Consideration of application by Authorities | 5d | Apr 30 | May 06 |
| 150 | Notify IAP's of decision re consideration of application | 5d | May 07 | May 13 |
| 151 | Consideration of conditions and possible appeal | 10d | May 14 | May 27 |
| 152 | Record of Decision | 5d | May 28 | Jun 03 |
| 153 | **Possibly proceed with the project** | **200d** | **Jan 06** | **Oct 10** |
| 154 | Sinter production operations (ongoing) | 200d | Jan 06 | Oct 10 |
| 155 | Inform Stakeholders of Record of Decision | 3d | Jun 18 | Jun 20 |
| 156 | Undertake Activity - Demonstration plant (6 months) | 25d | Jun 18 | Jul 22 |
| 157 | Continue with the EMP | 25d | Jun 18 | Jul 22 |
| 158 | **Plan of Study for Scoping - Coke Ovens Upgrade** | **269d** | **Oct 01** | **Oct 10** |
| 159 | Proposal to undertake activity (Jan. '02) | 1d | Oct 01 | Oct 01 |
| 160 | Pre- application consultation- DACEL (Feb. '02) | 1d | Oct 01 | Oct 01 |
| 161 | Submit an application for exemption (Feb. '02) | 1d | Oct 01 | Oct 01 |
| 162 | Application for exemption processed (Feb. '02) | 1d | Oct 01 | Oct 01 |
| 163 | Submit project Registration to DACEL | 1d | Oct 15 | Oct 15 |
| 164 | **Plan of Study for Scoping (PSS)** | **25d** | **Nov 18** | **Dec 20** |
| 165 | Scan IAP's - components / cells | 3d | Nov 18 | Nov 20 |
| 166 | Provisional ID of Issues and Alternatives | 3d | Nov 18 | Nov 20 |
| 167 | Strategise the PP process | 3d | Nov 18 | Nov 20 |
| 168 | Compile Report | 5d | Nov 28 | Dec 04 |
| 169 | Submit PSS Report to Lead Agent | 1d | Dec 05 | Dec 05 |
| 170 | Authority review of PSS | 11d | Dec 06 | Dec 20 |
| 171 | **Scoping Exercise** | **92d** | **Dec 02** | **Apr 08** |
| 172 | Authorities' Site Meeting (optional) | 1d | Dec 10 | Dec 10 |
| 173 | Compile draft Scoping Report | 20d | Dec 02 | Dec 27 |
| 174 | Place notice in press | 5d | Jan 09 | Jan 15 |
| 175 | Distribute the BID to key Stakeholders & Authorities | 5d | Jan 16 | Jan 22 |
| 176 | Submit draft Scoping Report to Authorities | 2d | Jan 23 | Jan 24 |
| 177 | Present draft Scoping Report at Public Meeting | 2d | Jan 27 | Jan 28 |
| 178 | Receive response to draft report | 20d | Jan 29 | Feb 25 |
| 179 | Edit the Scoping Report (incl. EMP for issues & alt.s) | 2d | Feb 26 | Feb 27 |
| 180 | Submit Report to Authorities | 1d | Feb 28 | Feb 28 |
| 181 | Authority Review | 21d | Mar 03 | Mar 31 |
| 182 | Distribute Scoping Report to key Stakeholders | 1d | Feb 28 | Feb 28 |

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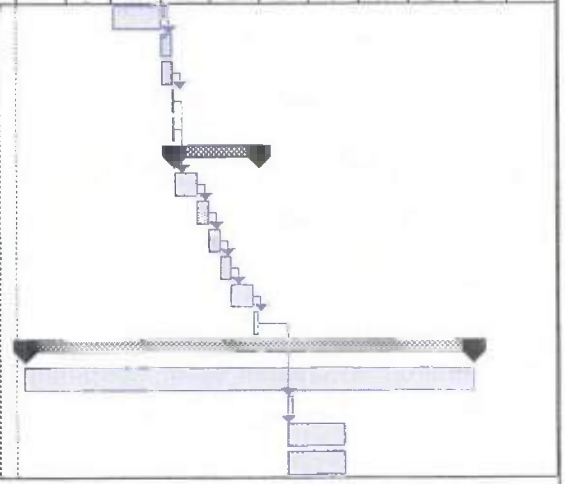
Task | Milestone | Rolled Up Split | External Tasks | Deadline
Split | Summary | Rolled Up Milestone | Project Summary
Progress | Rolled Up Task | Rolled Up Progress | External Milestone

# IVS AUTHORIZATION PROCESSES - STAKEHOLDER PARTICIPATION (POST MASTER PLAN)

| ID | Task Name | Days | Start | End |
|---|---|---|---|---|
| 183 | Specialists & IAP's review | 21d | Mar 03 | Mar 31 |
| 184 | Record any further issues & level of consensus | 5d | Apr 01 | Apr 07 |
| 185 | Finalise Scoping Report (incl. EMP for issues & alt.s) | 5d | Apr 01 | Apr 07 |
| 186 | Submit to Authorities the Scoping Report incl. an EMP, Issues & Response report | 1d | Apr 08 | Apr 08 |
| 187 | Make available to IAP's, the Scoping Report incl. an EMP, Issues & Response rep | 1d | Apr 08 | Apr 08 |
| 188 | **Decision-making process** | **38d** | **Apr 09** | **May 30** |
| 189 | Authority review | 10d | Apr 09 | Apr 22 |
| 190 | Conditions of approval | 5d | Apr 23 | Apr 29 |
| 191 | Consideration of application by Authorities | 5d | Apr 30 | May 06 |
| 192 | Notify IAP's of decision re consideration of application | 5d | May 07 | May 13 |
| 193 | Consideration of conditions and possible appeal | 10d | May 14 | May 27 |
| 194 | Record of Decision | 3d | May 28 | May 30 |
| 195 | **Possibly proceed with the project** | **200d** | **Jan 06** | **Oct 10** |
| 196 | Ongoing production of coke | 200d | Jan 06 | Oct 10 |
| 197 | Inform Stakeholders of Record of Decision | 3d | Jun 18 | Jun 20 |
| 198 | Undertake Activity - plant upgrade (30 months) | 25d | Jun 18 | Jul 22 |
| 199 | Continue with the EMP (ongoing) | 25d | Jun 18 | Jul 22 |

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Task | Milestone | Rolled Up Split | External Tasks | Deadline
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# Appendix D: Socio-economic Study

A socio-economic analysis of the sub-region has been compiled as part of the Master Plan specialist studies - refer to Appendix D: Prospects for the Regeneration of the Vaal Triangle Economy.

# PROSPECTS FOR THE REGENERATION OF THE VAAL TRIANGLE ECONOMY

REPORT TO THE COMMITTEE OF MAYORS AND MANAGING DIRECTORS OF THE KEY INDUSTRIES OF THE VAAL, TRIANGLE




REPORT COMPILED BY TJC SLABBERT AND TK DORFLING
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OCTOBER 2001

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PROSPECTS FOR THE REGENERATION OF THE VAAL TRIANGLE ECONOMY

THE REGION'S BEST OPPORTUNITY FOR ECONOMIC EXPANSION



## 1. INTRODUCTION

On the 25th of June 2001 a leadership summit was organised by the Principal of the Vaal Campus of Potchefstroom University. The following individuals were invited to the meeting:

| | | Name | Position | Institution |
|---|---|---|---|---|
| Mr | WC | Coertzen | General Manager Flat Products | Iscor Limited |
| Mr | BHHAJ | Eras | Chief Executive Officer and Chairman | Cape Gate (Pty) Ltd |
| Ms | C | Ferguson | Divisional Manager Corporate | Iscor Limited |
| Dr | MJ | Gouws | Managing Director | Dorbyl |
| Mr | PC | Hechter | General Divisional Manager | Samancor |
| Mr | KM | Makume | Mayor | Northern Free State District Municipality |
| Mr | S | Mofokeng | Councillor | Emfuleni Local Authority |
| Mr | J | Ndaba | Mayor | Metsimaholo Local Authority |
| Mr | M | Petlane | Councillor | Emfuleni Local Authority |
| Mr | B | Poggenpoel | Mayor | Midvaal Local Authority |
| Prof | PJJ | Prinsloo | Vice-Rector | Vaal Triangle Campus PUCHE |
| Mr | D | Sampson | Acting Managing Director | Sasol Chemical Industries |
| Mr | P | Skosanna | Mayor | Sedibeng Local Authority |
| Dr | T | Slabbert | Director | Vaal Reseach Group |
| Mr | PW | Stroebel | Managing Director and Financial Manager | Natref |
| Mr | T | Thabane | Mayor | Emfuleni Local Authority |
| Dr | MJUT | Van Wijngaarden | General Manager | Iscor Long Products |

The aim of the meeting was:

- to draw together all the development initiatives into one "mouthpiece" for the regeneration and development of the Vaal Triangle economy;
- to form a Vaal Economic Advisory Committee or Vaal Economic Regeneration Board (VERB) at Mayoral and Managing Director level to drive the economic regeneration and development process in the Vaal;
- to establish an executive arm for the VERB/Advisory Committee (responsible for the implementation of the process);
- to initiate a process of negotiations with different provincial and national government departments in order to "kick-start" the regeneration process; and
- to initiate the marketing of the Vaal as a prime business location in Gauteng with high-income housing and tourism along the Vaal River to increase attractiveness.



The outcome of the meeting is summarized below.

The summit resulted in the following consensus observations that were compiled for the proposed Vaal Economic Regeneration Board (VERB). The new proposed Vaal Economic Regeneration Board will be required to address the issues that follow, but first it will be important to:

## Form a Vaal Economic Regeneration Board (VERB)

There is a need for an overarching regional economic regeneration board. **Chapter 10** shows the proposed structure for the Vaal Economic Regeneration Board. An executive must also be appointed. Further, the participants agreed that there must be only **one consolidated process** for the regeneration of the regional economy.

Therefore the Vaal Research Group was selected as an institution that should compile a comprehensive report on each of the issues identified below so that the results can be used as a developmental tool to communicate the current initiatives and to negotiate regeneration initiatives to relevant role-players. The output of the Vaal Research Group (VRG) should thus be:

## A comprehensive report on regeneration issues

The co-ordination of the regeneration process will be handled by Prof. Piet Prinsloo (Potchefstroom University - PUK) and Dr. Tielman Slabbert (Vista University, Vaal Campus). The issues to be covered in the report were identified as follows:-

1. *The urgency for the regeneration of the Vaal economy*
   *An overview of the Vaal economy, compiled by the Vaal Research Group, showing recent trends in population growth, output trends, household income, employment rate, poverty, and emphasis therefore on the need for restructuring the local economy. There was a feeling of consensus amongst the participants that the regeneration process is well timed and necessary.*

2. *Local initiatives to regenerate the economy:*
   *A detailed description of all initiatives and the status of each initiative should be provided so that they can be prioritized on a regional basis if the VERB is asked to play a supportive role.*

3. *What does the Vaal Triangle have to offer new investors?*
   *How can the Vaal Triangle be a magnet for new investors? The Vaal Research Group should compile a comprehensive report on i.e. the infrastructure, transport facilities, development costs, service costs, vacant land, industrial space (buildings), safety and security, environmental aspects, local incentives and the human resources skills to attract new investors to the Vaal Triangle.*

4. *Aspects that are hampering new investments in the Vaal Triangle:*
   *What are the restrictive factors that are hampering new Investments? The Vaal Research Group should compile a comprehensive report on the opinions of industrial and business leaders in the Vaal Triangle and general information on aspects that are making new investment unattractive.*

5. *Kinds of businesses / industries that can be attracted to the Vaal Triangle*
*What kind of new industries and business can be attracted to the Vaal Triangle? The Vaal Research Group should compile a comprehensive report on, possible upstream and downstream industries, as well as new industries to increase the diversity of the manufacturing sector in the region. The reason is that the economy of the Vaal Triangle is skewed due to the large portion of steel manufacturing industry in the gross regional production figures. Value adding must be the key issue in the establishment of new enterprises. The establishment of labour intensive enterprises is also important to address the serious issue of unemployment in the region.*

*What do the provincial and national government have to offer the Vaal Triangle? The Vaal Research Group should compile a comprehensive report on the following aspects:*
*which contribution government can make to the regeneration of the Vaal Triangle economy;*
*provide information on specific programs like the Free State and Gauteng Special Economic Zone Programme, the Spatial Development Initiative of the national Department of Trade and Industry; and,*
*provide information on all other possible incentives (like tax exemptions) that are available.*

7. *Legislative issues*
*A study must be conducted to determine the impact of, environmental legislation, labor laws, minimum wages, IDZ exemptions etc, on the regeneration of the local Vaal Triangle economy.*

*A new marketing initiative for the whole region*

*An all-inclusive marketing plan for the Vaal Triangle that can attract new investors is necessary. The combination of the marketing and advertisement budgets of role-players can provide a more forceful initiative. The focal question to be asked is: what makes the Vaal Triangle different so that new investors will prefer this region?*

**Next meeting**

The next meeting will be scheduled in two to three month's time.

**Issues to be discussed**

1) The proposed new organizational structure, the Vaal Economic Regeneration Board (VERB).
2) Prioritization of initiatives - using *think tool*.
3) Commitment from industry, business, national, provincial and the local government, and labour unions. There was a strong feeling that the regeneration process will only succeed if there is a combined commitment of all relevant role-players.
4) Define the contribution of the different role-players.
5) The identification of capital resources to drive the regeneration process.
6) The way forward: focal questions to be aware of in the development of a vision and strategy for the regeneration process and the planning of the next steps.

- What are we trying to do?
- How are we going to do it?
- How do we know that it will work?
- How do we change/take action to improve and get results?

With this as a background, the Vaal Research Group conducted research to compile this report. The results are presented in the following chapters of the report. In the beginning of each chapter the task to be performed by the Vaal Research Group is highlighted in a gray box.

After the introductory chapter, **Chapter 2** gives an overview of the history, demographics, and economy of the Vaal Triangle, emphasizing the need for restructuring and regenerating the local economy. **Chapter 3** describes the various local initiatives that have been taken in attempts to regenerate the Vaal Triangle economy, while **Chapter 4** considers the various factors hampering new investment in the area. **Chapter 5** describes what the Vaal Triangle can offer new investors, and **Chapter 6** discusses the kinds of businesses/industries that can and should be attracted to the area. **Chapter 7** covers the various incentives and programs that are offered and/or managed by the provincial and national government departments, and **Chapter 8** discusses the legislative issues that are likely to impact on regeneration in the Vaal Triangle. In **Chapter 9** some of the suggestions and ideas behind a new integrated marketing initiative for the Vaal Triangle are presented. **Chapter 10** describes the proposed function and structure of the Vaal Economic Regeneration Board (VERB). The final chapter offers a conclusion and some recommendations.

## 2. FACTORS INFLUENCING THE URGENCY FOR THE REGENERATION OF THE VAAL TRIANGLE ECONOMY

*An overview of the Vaal Triangle economy should be compiled by the Vaal Research Group showing recent trends in population growth, output trends, household income, employment rate, poverty, and emphasis should be given to the need for restructuring the local economy.*



### 2.1 INTRODUCTION

The purpose of this section is to give an overview of the state and performance of the Vaal Triangle (VT) economy in recent years. The section covers the entire Vaal Triangle, which consists of the Emfuleni Municipal Area (EMA) and Metsimaholo Municipal Area (MMA). The Emfuleni Municipal Area comprises the former Western Vaal Metropolitan Area, the Eastern Vaal Metropolitan Area (excluding Meyerton) and the Vaal Oewer LAC and a portion of the Vaal River TRC. However, for the purpose of this report Meyerton is considered to be part of the Emfuleni Municipal Area, as all available statistical data include Meyerton in Vereeniging. The Metsimaholo Municipal Area comprises Sasolburg, Zamdela, Deneysville and Refenkgotso.

In order to highlight the urgency for economic regeneration in the area, the possible economic impact of the initiatives that are described in the sections that follow can be assessed through the use of an input-output analysis, the impact of a neglect of the manufacturing sector (leading to a decline of this sector) can be demonstrated as follows: a ten percent decline in the Vaal Triangle's industrial output in terms of GGP contribution, will have the following impact on the local economy:

- the total GGP of all sectors in the Vaal Triangle will decline by about seven percent, that is, R1,573-million per annum;
- the loss in formal employment opportunities will be about 9,300 people;
- the loss in household income will be about 10 percent, that is R980-million per annum;
- taking into account the household expenditure patterns of the Vaal Triangle, households will spend about R67-million less on water and electricity per annum;
- households will have about R16.5-million less available for rates and taxes per annum;
- households will spend about R187-million per annum less on food (a severe blow to local retail businesses);
- personal income tax from households will decrease by about R151-million per annum;
- the percentage of poor households will increase from 42.8 percent to 45.4 percent;
- the number of poor households will increase by 6,650 households (30,600 people);
- the annual poverty gap amount of poor households (amount needed to fill the gap between the poor households' income and their poverty line) in the Vaal Triangle will increase by 15 percent, that is R86.5 million per annum.

This chapter covers the historical development of the Vaal Triangle, as well as the demographics and some of the main economic aspects of the area.

### 2.2 HISTORICAL DEVELOPMENT

Unlike the towns of the Witwatersrand, which owe their development to the discovery of gold, the towns that form the Vaal Triangle owe their establishment to the discovery of coal deposits in the region. In 1878 George William Stow discovered deposits of coal, extending 100 kilometers north of Vereeniging and 32 kilometers south, across the Vaal River, totaling an area of approximately 500 square kilometers. At the current rate of mining it is expected that these deposits will only be exhausted in 400 years time. On the request of Stow, Senator Samuel Marks (a millionaire

entrepreneur), Isaac Lewis and Stow formed a company, known as De Zuid Afrikaansche en Oranje Vrijstaatsche Kolen en Mineralen Mijn Vereeniging. They purchased some coal-bearing farms in 1880, and started to operate coal mines in the area.

By 1882 there was a large enough population and sufficient development in the area of the coal mines to justify the establishment of a town. The town Vereeniging (after the last word in the company's title) was established in 1889. The discovery of gold in the Witwatersrand, and the accompanied increase in mining and commercial activities, as well as the increase in population resulted in an increased demand for coal and steel. This placed a greater significance on the coal mines at Vereeniging. The first African steel industry to melt scrap metals, called Union Steel Corporation of South Africa (USCO), was established by Samuel Marks and Horace Write in 1911, making Vereeniging South Africa's major center for steel and engineering industries.

The next major impact on the area was experienced during the Second World War. South Africa's contribution to the Allied Forces resulted in a great demand for flat steel products. Iscor's management decided to erect a new iron and steel works in 1941, sixteen kilometers west of Vereeniging, which was completed in 1943. A large number of people were employed, and provision had to be made to house this workforce. This led to the development of the town Vanderbijlpark. Full municipal status was granted to Vanderbijlpark in 1952.

The extensive coal reserves found in the northern Free State, together

with the close proximity to the Vaal River, led to the establishment of the South African Synthetic Oil Limited (SASOL) company in 1950. The establishment of Sasol led to the proclamation of the town Sasolburg in 1954.

Economic development associated with coal mining and iron and steel industries originally dictated the urban development pattern in the area. The spatial structure is characterized by a complex of small- to medium-sized urban areas, surrounded by a comparatively large agricultural hinterland. These urban areas are linked with well developed road and rail infrastructure which are interlinked with the national infrastructure such as the N1 and R59 freeways, and provide very good access to the large metropolitan areas such as the Witwatersrand and the East Rand. The rail service provides commuter, freight and long distance passenger services. Clusters of prominent urban development in the Vaal Triangle include those listed in **Table** 2.1.

Table 2.1 The Vaal Triangle suburbs



| | |
|---|---|
| Boipatong | Sebokeng |
| Boitumelo | Sharpville |
| Bophelong | Tshepiso |
| Deneysville | Vaal Oewer |
| Evaton | Vanderbijlpark and suburbs |
| Loch Vaal and North Vaal rural areas | Vereeniging and suburbs |
| Refenkgotso | Zamdela |
| Sasolburg | |

*Source: Slabbert 2001:2; Slabbert 1999:2.*

As a result of past (apartheid) policies, urban and economic development manifested geographically in a dualistic manner. The spatial economy is characterized by areas of economic activities closely surrounded by medium- to high-income areas, each with comparatively adequate urban facilities and economic centres. Low-income areas are located on the urban boundaries and in some cases isolated in rural areas where limited or no economic development exists.

The low-income areas, however, are economically almost totally dependent on the economic activities in the high- and medium-income areas. It is not only the workplaces that are located in the high- and medium-income areas, but also the trade centres. Between 80 and 90 percent of groceries and clothing are bought in the middle and high-income areas. This results in a high frequency of commuting between the low-income areas and the high-income areas. There is also a high frequency of commuting between Vanderbijlpark and Vereeniging. People commute daily between the different centres for work and trade. A well-developed road and transport system

therefore exists in the Vaal Triangle, linking the areas of economic activity with its sources of labour, inputs and markets.

## 2.3 DEMOGRAPHICS

Any change in the economy of a region will have an effect on its population in terms of employment opportunities, income (remuneration), expenditure patterns, the level of poverty and social services. The demographic, educational, employment, income, expenditure and poverty profiles of the Vaal Triangle are portrayed in the following paragraphs.

### 2.3.1 Population size

There are various opinions with regard to the actual population figures in the Vaal Triangle. For the purpose of this study, the 1999 population figures provided by WEFA were used to estimate the 2000 population figures. The population for the year 2000 for the EMA is estimated at 950 657[1], and for Metsimaholo, 117 622. This is shown in **Table 2.2**.

Table 2.2 Population of the Vaal Triangle (2000)

| | Emfuleni | Metsimaholo | Total |
|---|---|---|---|
| Population | 950,657 | 117,622 | 1,068,279 |
| Households | 206,665 | 27,164 | 233,829 |

*Source: Adapted from WEFA, 1999.*

#### Historic growth patterns

The EMA has experienced a relatively high average annual population growth rate in the past years, compared to the national growth rate. According to population figures supplied by WEFA (1996), the population of the former WVMS has grown at about 2.6 percent per annum since 1990; the population of the former EVMS grew at about 3.3 percent in the same time period, which means an average growth rate for the whole area of about 2.85 percent per annum. The national rate is calculated at 2.4 percent, which is regarded as the natural population growth rate. The higher growth rate indicates that the EMA has a history of high immigration. The growth rate for Metsimaholo is estimated roughly the same as the national growth rate (2.4 percent).

#### Household size

Based on data from a household survey by Slabbert & Mokoena (Survey data, 1999) towards the end of 1999, the average household size in the EMA is estimated at 4.6 members[2] per household. The total number of households in the EMA is estimated at 206,665. The average household size in Metsimaholo is estimated at 4.33 members per household, and the total number of households at 27,164.



#### Dependency ratio

Dependency ratios are usually calculated by dividing the total number of non-income earners by the total number of income earners. Based on the household survey by Slabbert & Mokoena, the dependency ratio is determined at 3.41 for the EMA and 3.09 for Metsimaholo (informal earners are included in the number of income earners). The dependency ratio in the EMA increased from about

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[1] For the purpose of this report population figures and economic data of Meyerton are included. The reason is that recent data on the regions still include Meyerton.

[2] Earlier estimates were higher, e.g. 5.02 in 1998. The reason for the smaller average household size from the survey results can be ascribed to the fact that many households divided themselves into smaller units in order to obtain more than one low cost (RDP) house. About 40 000 new RDP houses were built in the EMA.

2.77 in 1994 to 3.41 in 2000 because of the increase in unemployment, combined with a relatively high population influx.

### Home ownership

By 1993 most of the households, especially those residing in the former township areas, were renting the structure in which they resided. The type of dwellings in the township areas ranged from formal dwellings (44.7 percent), to informal dwellings (49.7 percent) and outbuildings (5.6 percent). Home ownership, however, changed drastically with the building of Reconstruction and Development Planning (RDP) houses in the area. A total of about 40 000 RDP houses were built. The construction of middle- and higher income houses, however, declined to a very low level as a result of an increased supply of houses, resulting from the departure of primarily white, Asian & colored home owners from the area. In the period 1991-1996 the growth rate for the white population group was -3.5 percent. The growth rate for Asians was -8.0 percent, while that of the coloured population group was -5.7 percent (1996 Census). Most of these individuals departed from middle- and higher income areas.

## 2.3.2 Literacy

By the year 2000, 19.8 percent of the total EMA population and 19.7 percent of Metsimaholo possessed no education (Adapted from survey data, 1999). The figure for 1991 was 23 percent, while the national figure for the same year was 30.6 percent. By the year 2000, three-quarters of the population in the EMA and 69.7 percent of Metsimaholo had an educational level of grade 3 or higher. A total of 22.8 percent of the EMA population and 21.5 percent of Metsimaholo had grade 10 or a higher qualification by the year 2000. The figure for those with a grade 10 or higher qualification in 1991 was about 19 percent (while it was 16 percent for the RSA in the same year). The average number of pupils per school is 936, and the average number of pupils per teacher is 47.

## 2.3.3 Employment and unemployment profiles

### Profile of the unemployed

**Table 2.3** and **2.4** show the population data for the EMA and Metsimaholo as derived from survey data. From these figures the unemployment rate in the EMA is determined at 51.3 percent and for Metsimaholo 42.7 percent. A problem that affects the accuracy of the unemployment rate, is the multiplying effect. This is the effect of high levels of unemployment on involuntary unemployment. For instance, a mother and a grown-up daughter from the same family are unemployed and both express a desire to take up employment. However, if one of them is successful in obtaining employment, the other will no longer be available for employment. It is not possible to correct or adjust the results for the impact of this multiplying effect.

Table 2.3 Labour force of the EMA (2000)

| Activity | Numbers | Percentage distribution | |
|---|---|---|---|
| | | Population | Economically active |
| POPULATION | 950,657 | 100.0% | |
| Less: PERSONS 0-14 YEARS & 65+ YEARS OF AGE & THE DISABLED & ECONOMICALLY NON-ACTIVE POPULATION | 507,651 | 53.4% | |
| ECONOMICALLY ACTIVE | 443,006 | 46.6% | 100.0% |
| Employed | 154,957 | 16.3% | 35.0% |
| Informally employed | 60,842 | 6.4% | 13.7% |
| Unemployed | 227,207 | 23.9% | 51.3% |

*Source: Survey data, 1999 (updated).*

Table 2.4 Labour force of Metsimaholo (2000)

| Activity | Numbers | Percentage distribution | |
|---|---|---|---|
| | | Population | Economically active |
| POPULATION | 117,622 | 100.0% | |
| Less: PERSONS 0-14 YEARS & 65+ YEARS OF AGE & THE DISABLED & ECONOMICALLY NON-ACTIVE POPULATION | 67,515 | 57.4% | |
| ECONOMICALLY ACTIVE | 50,107 | 42.6% | 100.0% |
| Employed | 22,701 | 19.3% | 45.3% |
| Informally employed | 5,999 | 5.1% | 12.0% |
| Unemployed | 21,407 | 18.2% | 42.7% |

*Source: Survey data, 1999 (updated).*

**Table 2.5** shows the trends in unemployment in the Vaal Triangle from 1993 to 2000.

Since 1991 the Vaal Triangle economy registered only a marginal growth In certain sectors, and a negative growth in other sectors. The net effect was a loss of employment opportunities. Surveys conducted in the townships by Vista University's Employment Research Unit indicate that, since 1990, younger people without jobs are moving into higher age categories, still unable to find employment. About 26 percent of the unemployed have less than five years formal schooling.

Table 2.5 Trends in unemployment (% of population and unemployment rates)

| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|
| Unemployed as % of population | 13.5 | 13.8 | 14.7 | 15.6 | 16.5 | 17.4 | 20.4 | 23.3 |
| Unemployment rate | 32.5 | 33.2 | 35.5 | 37.5 | 39.7 | 42.0 | 45.8 | 49.6 |

*Source: Slabbert, 1999 & survey data (updated).*



**Profile of the employed**

The potential labour force (persons aged between 15 and 64 years, minus the economically non-active population which includes housewives, the disabled and those who prefer not to work) of the EMA is in the order of 46.6 percent of the total population of the EMA, or 443,006 persons (**Table 2.3**), and 42.6 percent or 50,107 persons for Metsimaholo (**Table 2.4**). The employment profile in the Vaal Triangle is largely influenced by the economic structure of the area. The area is characterized by specialization in certain sectors. For instance, the basic metals and metal products manufacturing sectors are responsible for almost 61.9 percent of all manufacturing employment opportunities. Within the trade and services sector, wholesale and retail, community and personal services, and other activities are responsible for about 80.6 percent of tertiary employment. Chemical products are responsible for 84 percent of all manufacturing employment opportunities in Metsimaholo.



**Table 2.6** shows the formal employment profile of the Vaal Triangle. The table shows a high degree of the labour force involved in manufacturing (32.5 percent), trade (9.8 percent) and service oriented and other activities (34.6 percent).

Table 2.6 Formal employment profile of the Vaal Triangle (2000)

| Economic sector | Emfuleni | | Metsimaholo | | Total Vaal Triangle | |
|---|---|---|---|---|---|---|
| | Employment | % | Employment | % | Employment | % |
| Agriculture | 4,959 | 3.2 | 1,339 | 5.9 | 6,298 | 3.5 |
| Mining | 301 | 0.2 | 1,476 | 6.5 | 1,786 | 1.0 |
| Manufacturing | 50,361 | 32.5 | 6,992 | 30.8 | 57,353 | 32.3 |
| Electricity, gas water | 3,564 | 2.3 | 817 | 3.6 | 4,381 | 2.5 |
| Construction | 8,523 | 5.5 | 1,476 | 6.5 | 9,999 | 5.6 |
| Trade | 15,496 | 10.0 | 1,884 | 8.3 | 17,380 | 9.8 |
| Transport | 6,043 | 3.9 | 704 | 3.1 | 6,747 | 3.8 |
| Financing | 11,312 | 7.3 | 999 | 4.4 | 12,311 | 6.9 |
| Community and other services | 31,146 | 20.1 | 3,768 | 16.6 | 34,914 | 19.7 |
| Households | 23,243 | 15.0 | 3,246 | 14.3 | 26,490 | 14.9 |
| TOTAL | 154,957 | 100.0 | 22,701 | 100.0 | 177,658 | 100.0 |

*Source: Survey data 1999 (updated), distribution according to WEFA 1999.*

The overall self-employment rate (9 percent) for all population groups is substantially higher for the Vaal Triangle than the rate experienced by the country as a whole (2.5 percent) (Bloch and Dorfling, 2000).

### Occupational profile

Most (63.8 percent) of the economically active population in the Vaal Triangle is involved in artisan, services, production and clerical related occupations.

These occupations are typical for a region with a strong industrial base such as the economy of the Vaal Triangle. About 8.9 percent are involved in professional and managerial occupations (**Table 2.7**).

Table 2.7 Occupational profile of the economically active

| OCCUPATION | Emfuleni | Metsimaholo | Vaal Triangle |
|---|---|---|---|
| Professional /Technical | 6.0 | 7.2 | 6.2 |
| Managerial | 2.8 | 2.1 | 2.7 |
| Clerical | 13.4 | 11.2 | 13.2 |
| Transport | 5.7 | 5.6 | 5.6 |
| Service | 16.0 | 21.4 | 16.6 |
| Farmer | 3.8 | 5.2 | 4.0 |
| Artisan | 12.5 | 12.5 | 12.5 |
| Product./supervisor | 20.7 | 27.5 | 21.5 |
| Unspecified | 19.1 | 7.4 | 17.6 |
| TOTAL | 100.0 | 100.0 | 100.0 |

*Source: Vaalmet 1994 Adapted.*



### 2.3.4 Income and expenditure patterns

#### Sources of income per economic sector

**Table 2.8** shows the monetary and percentage contribution of the different sectors of the Vaal Triangle economy to the total remuneration of the area.

Table 2.8 Total remuneration per sector for the Vaal Triangle (2000)

| Economic sector | Total remuneration per annum R'000 | | | | | | Average wage per worker Per month (Rand) | |
|---|---|---|---|---|---|---|---|---|
| | Emfuleni | | Metsimaholo | | Total Vaal Triangle | | EMA | Metsimaholo |
| | R'000 | % | R'000 | % | R'000 | % | Rand | Rand |
| Agriculture | 49,544 | 0.6 | 21,162 | 1.4 | 70,706 | 0.8 | 833 | 1,317 |
| Mining | 15,587 | 0.2 | 102,375 | 6.7 | 117,962 | 1.3 | 4,190 | 5,780 |
| Manufacturing | 3,097,875 | 40.5 | 744,648 | 48.9 | 3,842,523 | 41.9 | 5,126 | 8,875 |
| Electricity/ Gas/Water | 258,724 | 3.4 | 103,530 | 6.7 | 362,254 | 3.9 | 6,049 | 10,560 |
| Construction | 277,456 | 3.6 | 47,592 | 3.2 | 325,048 | 3.5 | 2,713 | 2,687 |
| Trade | 762,980 | 10.0 | 99,249 | 6.5 | 862,229 | 9.4 | 4,103 | 4,390 |
| Transport | 445,061 | 5.8 | 72,535 | 4.8 | 517,596 | 5.6 | 6,137 | 8,586 |
| Financing | 536,875 | 7.0 | 66,042 | 4.3 | 602,917 | 6.6 | 3,955 | 5,509 |
| Social Services Government & Other | 2,208,193 | 28.9 | 266,560 | 17.5 | 2,474,753 | 27.0 | 3,383 | 3,167 |
| TOTAL | 7,652,295 | 100 | 1,523,693 | 100 | 9,175,988 | 100 | 4,115 | 5,591 |

*Source: WEFA 1999 updated & adapted with survey data.*

The largest percentage (40.5 percent in Emfuleni and 48.9 percent in Metsimaholo) of remuneration is paid by the manufacturing sector, second largest (28.9 percent and 17.5 percent) is paid by the social services, government and other sector; and third largest (9.4 percent) is paid by the trade sector. The highest average monthly wages are paid by the transport, electricity, gas and water sector, and the manufacturing sector. **Table 2.8** shows the average wage per worker per month paid in the different sectors of Emfuleni and Metsimaholo.



### Average monthly income

The average household income for 2000 is estimated at R3,083 per household per month for Emfuleni and R3,539 for Metsimaholo (Survey data, 1999 Adapted). The average formal wage per worker was R4,115 per worker per month for Emfuleni and R5,591 for Metsimaholo (**Table 2.8**). The average wage per formal sector worker increased substantially during the 1990's. The reduced number of workers in the Vaal Triangle therefore earn higher nominal wages on average. A reason for this higher average wage per worker is possibly labour union actions, resulting in higher wages for their members. However, as firms are cutting back on labour, less workers have employment in the Vaal Triangle. The result of this is that a skew distribution in personal income exits in the area, with a relatively large group of the community earning a relatively small portion of the total income.

### Sources of household income



**Table 2.9** shows the sources of household income in Emfuleni and Metsimaholo. Salaries and wages contribute between 75.4 and 83 percent to the average household income in the Vaal Triangle; informal activities between 2.8 percent and 6.7 percent; pensions between 8.0 percent and 9.7 percent; remittances 1.6 and 2.1 percent, and other incomes 4.6 percent and 6.1 percent.

Table 2.9 Household income in the Vaal Triangle (2000)

| | Emfuleni | Metsimaholo |
|---|---|---|
| Salaries and wages | 75.4% | 83.0% |
| Informal /Self-employed | 6.7% | 2.8% |
| Pensions/other | 9.7% | 8.0% |
| Remittances | 2.1% | 1.6% |
| Other | 6.1% | 4.6% |
| TOTAL | 100.0% | 100.0% |

*Source: Survey data, 1999 (adapted).*

The expenditure profile for households living in the Vaal Triangle is shown in **Table 2.10**. An estimated 16.2 to 18.6 percent of household expenditure is on average allocated for food - it is thus the most important expenditure item. Other important expenditure items are housing (13.9-16.8 percent), transport (5.7-7.5 percent), water and electricity (6.0-7.0 percent) clothing (4.5-6.8 percent), and car and loan repayments (6.0-6.5 percent).

Table 2.10 Expenditure profile of households in the Vaal Triangle (2000)

| Expenditure item | % of total household expenditure | |
|---|---|---|
| | Emfuleni | Metsimaholo |
| Housing rent/bond | 13.9 | 16.8 |
| Water | 2.3 | 2.7 |
| Electricity | 4.7 | 3.3 |
| Food | 18.6 | 16.2 |
| Transport | 7.5 | 5.7 |
| Clothing | 6.8 | 4.5 |
| School | 4.2 | 3.7 |
| Investments | 5.5 | 6.5 |
| Gambling | 0.3 | 0.3 |
| Savings | 2.2 | 2.3 |
| Licenses | 3.7 | 2.2 |
| Property rates & taxes | 1.6 | 1.8 |
| Income tax | 15.4 | 21.6 |
| Housekeeping services | 1.6 | 1.0 |
| Telephone | 3.9 | 2.6 |
| Car repayment | 3.8 | 4.6 |
| Loans | 2.7 | 1.4 |
| Other exp. | 1.3 | 2.8 |
| TOTAL | 100.0 | 100.0 |

*Source: Survey data,1999 (updated).*



### 2.3.5 Poverty

The simplest method of measuring poverty is to express the number of poor people as a proportion of the population. This is called the headcount index (World Bank, 1990: 27). The headcount index is defined as the fraction of the population living below the poverty line (Deaton, 1994: 122). The purpose of the headcount index is therefore to quantify the number of those individuals or households that fall below the poverty line.

The headcount index for the Vaal Triangle for the year 2000 was 0.428. This implies that 42.8 percent of the households' income was below their respective poverty lines.

By calculating each household's poverty line (called the household's HSL) and comparing this with its own income, the distribution of households below (and above) their poverty lines can be determined. The results are listed in **Table 2.11**. This table gives the distribution of households in different income/HSL categories for the entire sample population. Rows A and B indicate the percentage of households earning an income below or equal to the HSL. Row C indicates the per-

centage of households earning an income above the HSL, but below or equal to the HEL threshold. The Household Subsistence Level (HSL) only covers the basic items like food, clothing, rent, transport, etc. However, it is estimated that on average households spend two thirds of their income on these basic items, while one third is spent on other necessary items like medicine etc. If this is included, one speaks of the Household Effective Level (HEL), which is one and a half times the HSL. Rows D to I indicate the percentage of households earning an income above the HEL threshold. The table shows the distribution for all households. Household incomes are expressed as a percentage of their specific HSL. If a household income is greater than its HSL, the household falls in the income/HSL categories above 100 per cent. It illustrates that:

- The percentage of households receiving an income of less than their respective HSLs is 42.8 (row B).
- The percentage of households receiving an income above their respective HSLs, but less than the HEL is 10.8 (row C)
- The percentage of households receiving an income above the HEL-level is 46.3.

Table 2.11 Percentage of households in different income categories expressed as % of the HSL (2000): Vaal Triangle

| Household income as percentage of the HSL | | Percentage households | Cumulative percentage |
|---|---|---|---|
| A | 0 – 50 | 20.4 | 20.4 |
| B | 51 – 100 | 22.4 | 42.8 |
| C | 101 – 150 | 10.8 | 53.7 |
| D | 151 – 200 | 10.1 | 63.8 |
| E | 201 – 300 | 11.6 | 75.4 |
| F | 301 – 400 | 6.2 | 81.6 |
| G | 401 – 500 | 3.9 | 85.3 |
| H | 501 – 600 | 4.2 | 89.7 |
| I | 601 + | 10.3 | 100.0 |
| TOTAL | | 100.0 | |

*Source: Survey data, 1999 (updated).*



**The poverty gap of poor households in the Vaal Triangle**

The headcount index is a limited measure of the level of poverty. It does not take into account the degree of poverty. In order to capture the degree (or magnitude) of poverty, the poverty gap measure is used in conjunction with the headcount index. The poverty gap measures the average shortfall of the income of the poor from the poverty line.

The poverty gap index for the Vaal Triangle is calculated at 0.46. This means that on average the poor households have a shortage equal to 46 percent of their specific poverty lines. For example, if a household's own poverty line is R1,000, and the total income of the household is only R540, the shortfall is R460 (a poverty gap index of 0.46).

The number of households below their respective poverty lines is estimated at 100 078 or 42.8 percent of all the households in the Vaal Triangle.

## 2.4 ECONOMIC ASPECTS

In this section the economic base of the Vaal Triangle is analyzed in provincial and local context.

### 2.4.1Economy in provincial context



The Gauteng Province represents the largest economic subregion in South Africa. It accommodates 18 percent of the total population of the country and accounts for 38 percent of the national product. The Vaal Triangle economy forms an integral part of this economic subregion. It is characterized by

a high degree of interdependence with the other subsystems of the Gauteng metropolitan complex. Although Metsimaholo does not belong to the Gauteng Province, it is regarded as being part of Gauteng province for the purpose of this report, as it is economically an integrated part of the Vaal Triangle – and therefore of the Gauteng economy.

**Table 2.12** shows the subregional contribution of different regions in Gauteng as a percentage of the total GGP of Gauteng.

According to the information in **Table 2.12**, the economy of the Vaal Triangle contributed 7.8 percent to the GGP of the Gauteng Province in 2000. This figure is lower than the 1995 figure, because of the decline of the VT economy.

Table 2.12 Sub-regional contribution towards GGP in Gauteng Province (%)

| SUBREGION | 1970 | 1975 | 1980 | 1985 | 1990 | 1995 | 2000 |
|---|---|---|---|---|---|---|---|
| Vaal Triangle | 6.7 | 8.5 | 9.1 | 7.6 | 8.3 | 8.4 | 7.8 |
| Pretoria | 16.6 | 18.0 | 17.3 | 19.6 | 21.0 | 21.6 | 22.3 |
| Johannesburg | 43.3 | 36.6 | 33.0 | 33.1 | 32.5 | 32.9 | 35.9 |
| Rest of Gauteng | 33.4 | 36.9 | 40.6 | 39.7 | 38.2 | 37.1 | 34.0 |
| TOTAL | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source: Calculated from statistics by WEFA: 1996 & 1999 (updated).*

From the analysis in **Table 2.12** it is evident that:

- The Vaal Triangle experienced an increase of 16.4 percent (between 1970 and 2000) in terms of importance in the economy of the Gauteng Province (the reason is partly the decrease in mining activities in the Witwatersrand which resulted in a relative increase of importance of the Vaal Triangle economy.)
- The importance of the Johannesburg area declined by 17.1 percent between 1970 and 2000. This decline is attributed to a decline in mining activities as well as industries that are forwardly linked to the mining sector.
- The contribution of Pretoria increased by 34.3 percent between 1970 and 2000, mainly because of an increase in manufacturing activities.
- Although the GGP contribution of the Vaal Triangle (7.8 percent) is not as high as the other regions, the economy of the area still makes a considerable contribution to the GGP of Gauteng.

**Table 2.13** shows the contribution by sector of the Vaal Triangle to Gauteng's GGP, compared to Pretoria, Johannesburg and the rest of Gauteng. Although the Vaal Triangle contributes only 7.8 percent to the total GGP of Gauteng, it contributes 19.4 percent of the total agricultural production in Gauteng, 17.1 percent of the total manufacturing production and 16.2 percent of the total electricity/gas/water production. The shaded area in the table shows the area of specialization of the Vaal Triangle, namely manufacturing. Taking into account that the manufacturing sector of Gauteng contributes 19.8 percent (the largest contributing sector) to the GGP of Gauteng, it is evident that the manufacturing sector of the Vaal Triangle, as a supplier of intermediate inputs, has a significant role in the Gauteng economy.

Table 2.13 Percentage contribution of different regions to the GGP of Gauteng, 2000

| Economic sector | Vaal Triangle | Pretoria | Johannesburg | Rest of Gauteng | TOTAL |
|---|---|---|---|---|---|
| Agriculture | 19.4 | 17.5 | 7.1 | 56.0 | 100.0 |
| Mining | 2.2 | 1.7 | 5.1 | 91.0 | 100.0 |
| Manufacturing | 17.1 | 15.6 | 10.1 | 57.2 | 100.0 |
| Electricity/Gas/Water | 16.2 | 13.8 | 29.2 | 40.8 | 100.0 |
| Construction | 6.3 | 21.9 | 39.5 | 32.3 | 100.0 |
| Trade | 4.5 | 22.4 | 44.5 | 28.6 | 100.0 |
| Transport | 5.0 | 25.3 | 35.4 | 34.3 | 100.0 |
| Financing | 3.7 | 21.6 | 50.2 | 24.5 | 100.0 |
| Services, Government & Other | 7.6 | 35.0 | 26.3 | 31.1 | 100.0 |
| % Contribution to GGP of Gauteng | 7.8 | 22.3 | 36.0 | 33.9 | 100.0 |

*Source: Calculated from statistics by WEFA: 1999 updated.*

The Vaal Triangle's contribution to the total agricultural production of Gauteng is 19.4 percent. Agriculture in Gauteng, however, contributes only 0.6 percent to the GGP of Gauteng. Agriculture has also a relatively modest role in the Vaal Triangle economy. It contributes only 1.4 percent to the GGP of the area, whereas manufacturing contributes 42.8 percent (**Table 2.14**).

### 2.4.2 Economy in local context

The structural composition of the Vaal Triangle economy can be described in terms of the main economic sectors (primary, secondary and tertiary) and the trends experienced by these sectors. The economic structure of the area (in terms of GGP contribution) for 1990 and 2000 is set out in **Table 2.14**. This table shows that the manufacturing sector is the single largest economic activity in the Vaal Triangle.

Table 2.14 Economic structure of the Vaal Triangle: GGP contribution, Rand Million (2000)

| ECONOMIC SECTOR | 1990 | % | 2000 | % | % Growth per annum |
|---|---|---|---|---|---|
| Agriculture | 293 | 1.9 | 314 | 1.4 | 0.74 |
| Mining | 563 | 3.6 | 265 | 1.2 | -5.62 |
| Manufacturing | 7,758 | 49.9 | 9,857 | 42.8 | 2.64 |
| Electricity/Gas/Water | 1,557 | 10.0 | 1,085 | 4.7 | -3.12 |
| Construction | 363 | 2.3 | 551 | 2.4 | 4.97 |
| Trade | 1,165 | 7.5 | 1,703 | 7.4 | 4.44 |
| Transport | 416 | 2.7 | 2,023 | 8.8 | 30.32 |
| Financing | 1,621 | 10.5 | 2,717 | 11.8 | 6.40 |
| Services, Government & Other | 1,800 | 11.6 | 4,491 | 19.5 | 13.35 |
| Total | 15,535 | 100.0% | 23,006 | 100.0% | 4.29 |

*Source: Calculated from statistics by WEFA: 1999 (updated).*

The following paragraphs focus on the different sectors of the Vaal Triangle economy in order to comprehend its composition, function and development trends.



**Primary sector**



The primary economic sector consists of two sub-sectors, namely agriculture and mining. Agriculture's relative contribution to the GGP of the Vaal Triangle decreased from 1.9 percent in 1990 to 1.4 percent in 2000. Agriculture accounts for very little economic activity in the area. Mining

contributes only 1.2 percent to GGP of the area. The contribution of the mining sector to the GGP of the Vaal Triangle declined from 3.6 in 1990 to 1.2 percent in 2000.

### Secondary sector

Secondary economic activities in the Vaal Triangle consist of three subsectors, namely manufacturing, electricity/gas/water and construction.

### Manufacturing

The relative contribution of manufacturing towards the GGP of the Vaal Triangle decreased from 49.9 percent in 1990 to 42.8 percent in 2000. However, this sector can be regarded as the dominant economic activity in the area. The Vaal Triangle has a wide range of industrial activities. The industrial activities are recorded, with their share in the manufacturing sector's GGP contribution, in **Table 2.15**.

Table 2.15 Industrial activities, Vaal Triangle (2000)

| | Emfuleni % | Metsimaholo % | Total % |
|---|---|---|---|
| **Food, drink and tobacco** | 3.5 | 2.2 | 3.1 |
| **Textiles, clothing and footwear** | 1.8 | 1.8 | 1.8 |
| **Fuel, petroleum and rubber products** | 3.1 | 89.1 | 28.7 |
| **Other non-metallic mineral products** | 5.9 | 1.3 | 4.6 |
| **Metal, metal products and machinery** | 80.6 | 4.5 | 58.0 |
| **Electrical machinery & electronic appliances** | 2.8 | 0.3 | 2.0 |
| **Transport equipment** | 1.3 | 0.7 | 1.1 |
| **Furniture** | 1.0 | 0.1 | 0.7 |
| **Total** | 100.0 | 100.0 | 100.0 |

*Source: WEFA, 1999 (updated).*

The manufacturing of metal, metal products and machinery dominates the manufacturing in Emfuleni. The fuel, petroleum and rubber sector dominates the manufacturing sector in Metsimaholo. The industrial base of the Emfuleni therefore lies in the manufacturing of metal (basic iron and steel) as well as the manufacturing of a wide range of metal products and machinery; for Metsimaholo it lies in fuel, petroleum and rubber products. The metal and metal products industries (mainly iron/steel industries) are responsible for 80.6 percent of the manufacturing activities in Emfuleni, while the fuel, petroleum and rubber sector is responsible for 89.1 percent of manufacturing in Metsimaholo. This shows the strong dependence of the Vaal Triangle economy on these industries.

### Construction, Electricity/Gas/Water

The GGP contribution of construction activities to the Vaal Triangle during 1990 was 2.3 percent. This figure slightly increased to 2.4 percent in 2000. Electricity, gas and water contributed 4.7 percent to the GGP of the area in 2000.

### Tertiary sector

Tertiary activities consist of a number of sectors such as trade, transport, financing, personal and government services. Combined, this sector registered a GGP contribution of 32.3 percent in 1990 to the Vaal Triangle. By 2000 the figure had reached 47.5 percent, which indicates a relative growth of 47.1 percent in the contribution of this sector between 1990 and 2000. Most notably the following sectors experienced an above average growth:

- Transport, storage and warehousing activities
- Community, social and personal services

### 2.4.3 Functional specialization

The functional specialization in the VT refers to those urban functions and economic activities in which the area specialises. The EMA economy is considerably dependent on the basic iron and steel industry, while the MMA is considerably dependent on Chemical industries.

Table 2.16 Functional specialisation of the EMA's urban areas

| AREA | FUNCTIONAL SPECIALISATION | ECONOMIC BASE |
|---|---|---|
| Emfuleni: Vanderbijlpark | Basic iron and steel, heavy metal, engineering workshops, tertiary education, recreation/tourism, regional shopping. | Large but smaller than EVMS. The economic base is less diversified and specialises in basic iron and steel manufacturing |
| Emfuleni: Vereeniging | Heavy metal, ceramics, engineering workshops, water based recreation/ tourism, government services and higher order regional shopping centre. | Large, relative more diversified but specialised in manufacturing |
| Metsimaholo | Chemical industries, light engineering, mining and recreation/tourism | Medium to large and highly specialised in chemical related manufacturing activities |

*Source: Slabbert 1999 adapted.*

### 2.4.4 Linkages and multipliers

**Sectoral linkages** refer to the interaction between different economic sectors in the Vaal Triangle's economy. For example, the basic iron and steel industry supplies inputs to several metal and machinery industries. The stronger the linkage, the more dependent the industries are on one another. The degree of linkages has a direct bearing on multiplier effects.

**Multipliers** assess the effect on an economy of changes in the elements that are exogenous to that economy. A decrease in final demand (exogenous change, which is consumption of final goods and services, exports, fixed investments in the Vaal Triangle, imports and/or a change in inventories) leads to a decrease in production, followed by a decrease in household income and employment. The higher the multiplier, the larger is the impact of a change on the economy. The effect of such changes is measured most frequently in terms of:

- output loss of the sectors of the economy;
- income lost by households because of a decrease in final output; and,
- employment (in physical terms) that is expected to be lost.



The degree of linkages provides an indication of agglomeration advantages or disadvantages that point to existing and potential development opportunities or constraints. Two types of linkages can be distinguished, namely:

Backward linkages: These illustrate the effect of a change in the demand for production in a sector on its demand for intermediate inputs, derived from other sectors. For example: a decline in production by an iron and steel industry will inescapably lead to a reduction in the demand of that industry for inputs like coal, labor, electricity, machinery. The reduction in demand for coal will have the effect that the coal mines will also reduce their output. This will in turn lead to a reduction in demand for inputs in the coal mines (labor, machinery, electricity). The higher the number of backward linkages in a sector, the higher the impact of change in economic activity within that sector (and vice versa).



Forward linkages: These illustrate the extent to which the rest of the sectors in the study area are dependent on the sector concerned for inputs. For example: the closure of a basic iron and steel

industry will inescapably lead to the closure (or departure) of firms using iron and steel as inputs in their production processes.

In the following paragraphs the linkages of the different sectors of the economy of the Vaal Triangle are discussed.

**Agriculture**

Backward linkages to the Vaal Triangle economy of this sector are relatively small (57.1 percent of the total input cost). This implies that local inputs are not sufficient for production in this sector, and must therefore be imported. Forward linkages to the area are high, as 72.8 percent of the agricultural intermediate output is taken up by local manufacturing enterprises. Improved agricultural output would thus reduce imports and stimulate the manufacturing sector.

**Mining and quarrying**

Mining activities developed strong forward linkages with manufacturing activities in the Vaal Triangle. Most of the intermediate output is taken up by local industries. Backward linkages to the local economy are weaker. Less than 61 percent of the mining's intermediate input (including labor) is provided by other economic activities in the Vaal Triangle. These backward linkages are also influenced by the downward trend in the mining activities in the area.

**Manufacturing**

Due to its size in the Vaal Triangle economy, the manufacturing sector has significant backward linkages to the local economy. Of the total inputs, 59.3 percent comes from within the Vaal Triangle. A decrease in manufacturing output (production) would lead to a significant decrease in the demand for the output of other economic activities in the area, including labor. These economic activities are, for example:

- Agriculture
- Mining
- Other manufacturing activities
- Labor

The development of inter-industrial linkages, and linkages with the above-mentioned activities, has led to agglomeration advantages and high employment multipliers in the industry. On the other hand, a decrease of manufacturing output (production) will lead to a decline in the output of other sectors of the local economy, for example agriculture, mining, other manufacturing activities, and labor.

There is a relatively low forward linkage with trade and commercial activities in the Vaal Triangle, due to the close proximity of suppliers located in the Witwatersrand. This means that there is a high forward linkage with trade and commercial activities in the Witwatersrand.

High (30.5 percent of total intermediate input) inter-industrial linkages exist in the manufacturing sector. This implies a high potential for the development of new industrial sectors linked to existing industries that are important markets of suppliers of intermediate products. However, a decline in certain manufacturing activities will have a strong negative impact and multiplier effect on industries, using intermediate inputs from manufacturing activities that decline.

**Construction**

This sector has strong backward linkages (86.7 percent of its total input) in the local economy. Improved building activities will therefore require substantial inputs from other existing sectors in the Vaal Triangle. Some of these sectors are:

- manufacturing of bricks, tiles, roof sheets, pipes, paint, board, etc;
- other construction activities (subcontractors);

- financing and business services (bonds, loans, professional services); and,
- households (employment).

### Electricity/Gas and Water

A decrease in the consumption of water and electricity in the Vaal Triangle will not only lead to a decrease in employment opportunities to provide and maintain these services, but will also lead to a decrease in employment opportunities in all sectors of the economy. This is because of the other sector's linkages to electricity and water provision.

### Trade

This sector has developed strong linkages, both forward and backward, with other sectors in the Vaal Triangle economy. This implies that this sector is dependent on the local economy for 80.4 percent of its inputs and provides 80.5 percent of its output to other sectors of the economy.

An increase in the output of retail activities will increase the input requirements of the sectors with which they are backwardly linked. These sectors are for example:

- manufacturing (20.6 percent);
- other trade activities (7.4 percent);
- financing and business services (5.9 percent); and,
- households (35.8 percent)

### Transport

This sector has important backward linkages with the manufacturing and trade sectors. Output in transport and communication activities is dependent on industrial production, demand for passenger transport, and business (retail) activities.

### Financing

This sector has strong forward linkages with the main sectors of the Vaal Triangle economy, which show that other activities in the VT are dependent on this sector for their input. Its backward linkages are comparatively small which implies that input in this sector is only to a limited extent dependent on the other sectors.

### Services

This sector has strong linkages with almost all other sectors of the Vaal Triangle economy, of which manufacturing is the most prominent. About 77 percent of inputs required by this sector is provided by local economic activities, whilst more than 90 percent of this sector's output is taken up by the local economy of the Vaal Triangle.



## CONCLUSION

The economic and urban development pattern of the Vaal Triangle, which consists of the Emfuleni Municipal Area and Metsimaholo Municipal Area, has been associated with the coal mining and iron and steel industries. The spatial structure is characterized by a complex of small- to medium-sized urban areas, surrounded by a comparatively large agricultural hinterland. These urban areas are linked with well developed road and rail infrastructure. The area houses just over one million people, and experiences a high population growth rate, attributed to a high rate of immigration. The almost 50% unemployment rate is reflected in the increase in dependency ratio; the level of education and the self-employment rate in the area are both higher than that experienced nationally. The employment profile in the Vaal Triangle is largely influenced by the economic structure of the area, with the manufacturing and service oriented sectors being the most dominant both in terms of

employment and GGP contribution. Because of the exceptional dominance of the manufacturing sector in the area, it is not surprising that the largest percentage of remuneration is paid by this sector. Across all sectors the average wage per formal sector worker increased substantially during the 1990's; the reduced number of workers in the Vaal Triangle therefore earn higher nominal wages on average. However, in total the number of households below their respective poverty lines is estimated at 42.8 percent of all the households in the Vaal Triangle.

The Vaal Triangle has a high degree of interdependence with the other subsystems of the Gauteng metropolitan area. Although the area contributes 7.8 percent to the GGP of the province, its intrinsic value lies in its almost 20 percent contribution to the total agricultural production in Gauteng, just over 17 percent of the total manufacturing production, and 16.2 percent of the total electricity/gas/water production. The production structure of the Vaal Triangle is dominated by the manufacturing sector, with a 42.8 percent GGP contribution in 2000, although this declined from 49.9 percent in 1990. The sector offers a wide range of industrial activities, most significant in terms of GGP contribution being the manufacturing of metal, metal products and machinery sector in Emfuleni and the fuel, petroleum and rubber sector in Metsimaholo. There is a strong dependence by the Vaal Triangle economy on these industries.

Considering the decline experienced by the manufacturing sector, which dominates economic activity in the Vaal Triangle, there have been a number of initiatives undertaken or planned to regenerate the local economy. These are discussed in the following chapter.

# 3. LOCAL INITIATIVES TO REGENERATE THE ECONOMY

*A detailed description of all initiatives and the status of each initiative should be provided so that these initiatives can be prioritized on a regional basis if the Vaal Economic Regeneration Board (VERB) is required to play a supportive role.*

## 3.1 INTRODUCTION

Since the early 1990s, manufacturing activities in the Vaal Triangle have decreased considerably. Several initiatives came into being in an effort to save and revive the economy. However, for the regeneration of the Vaal Triangle economy to succeed it is now of vital importance that these efforts be combined into one Programme, driven by a strong leadership from local government and industry and aided by the educational institutions. The different initiatives on their own have led not only to a duplication of efforts, but also to insignificant results. Through working together, a lot of time and effort can be saved, because all the different initiatives are related to one another in some way or other. For example, if the organic farming case can be linked to the regeneration of industries' case, the combined effort can become a strong case for inclusion in the Gauteng government's *Blue IQ* Programme. Combined the two initiatives would have a strong impact on the economy.

The following are some of the main initiatives that have emerged in recent times, and each is discussed in this chapter:

- Vaalgro (section 21 company).
- ChemCity (Sasolburg).
- Vaal Economic Forum.
- The industrial regeneration initiative initiated by the national Department of Trade and Industry.
- The establishment of a manufacturing advisory centre (Vaalmac).
- The upgrading of the Vereeniging Airport to international status.
- The development of an Industrial Development Zone (IDZ).
- The National Organic Agriculture and Healing (NOAH) Programme.
- Leadership summits (PUK).
- The culture, tourism and entertainment initiatives.
- The marketing of the Vaal Triangle initiative.
- Research support (Vaal Research Group - Vista, PUK & VTT, in collaboration with Tilburg University in the Netherlands and Molde University in Norway).



## 3.2 AALGRO (SECTION 21 COMPANY)

Vaalgro is a section 21 company, proposed as a vehicle for the development and establishment of affirmative business enterprises (ABEs). The objectives of the company include the facilitation of affirmative procurement; the upliftment of the local community and contribution towards regional socio-economic growth; and the support of government initiatives on equity empowerment, job and wealth creation. The process to be followed involves Vaalgro bringing entrepreneurs in contact with opportunities; the evaluation of proposals; and the training and financing of entrepreneurs. It also includes the coaching and mentoring of SMMEs, and the support of SMME's via its Support Bureau.

1) 3.3 downstream sector of the chemical and allied industries. These businesses can be completely independent businesses, or businesses which are wholly or partially owned by ChemCity.

Decisions related to these activities will be guided by the following statement of direction: "ChemCity will enable enterprises operating in the downstream sector of the chemical industry to become part of a "virtual" chemical "city" comprising a multi business portfolio of independent, acquired, joint ventured and/or allianced ventures. These businesses can be geographically distributed or situated on infrastructure and facilities adjacent to/or integrated into existing major chemical complexes.

Business units in the portfolio develop and implement strategies based on competitive advantages arising out of access to unique raw material, utility availability, incentives and synergy exploitation opportunities" (ChemCity 2001).

Value creation within business units in the portfolio takes place through the fulfilment of customer needs as it relates to each business's products, whereas ChemCity's "corporate" value adding activities are focussed on the identification of more and better opportunities to improve performance of individual business units, and by ensuring that it is appropriately equipped to participate in the realisation of these opportunities.

The statement and the basis on which the opportunity is pursued, emphasises the establishment and management of a multi-business company with a focus on the value-added sector of the chemical and allied industries. Business units within ChemCity create value through direct contact with customers competing in their respective markets, satisfying the needs of their customers, thereby generating revenue and profits.

ChemCity itself therefore will not have external customers but act as an intermediary, influencing the decisions and strategies pursued by individual businesses in the portfolio standing between the business and those who provide capital for their use. It follows that primary wealth creation takes place at the business level and that ChemCity will work through the businesses to create value.

To create value, ChemCity will concentrate on identifying more and better opportunities for performance enhancement within each of the businesses; and ensuring that it is equipped to participate in the realisation of these opportunities. Success is dependent on creating fit between the way in which ChemCity operates and the performance improvement opportunities being pursued within each member of the portfolio. ChemCity therefore has to have distinctive characteristics that are especially relevant to its specific portfolio of businesses. For significant value to be created there must be good fit between the characteristics of ChemCity and its businesses.

ChemCity's corporate strategy will guide decisions about the portfolio covering acquisitions, joint ventures, divestments, alliances, business redefinition's, and new ventures, determining what businesses will be in the portfolio, and hence what characteristics and opportunities they will represent. Decisions about ChemCity, including those related to how to structure corporate management levels, who to employ at the centre, what planning and control systems to use, and so on, will determine its characteristics and consequently the degree of fit with its businesses.

It is this fit between ChemCity and its businesses at any time, which will provide the basis for value creation. Understanding the nature of this fit will be the crucial task in assessing and developing ChemCity's corporate strategy.

The initial stages of ChemCity's establishment phase will be dominated by pursuance of growth-oriented financial goals, in order to obtain critical mass. In following a strategy based on fit creation and pursuing essentially financially oriented goals, two areas of excellence will be established. The one area of excellence is portfolio management – a proficiency in managing a portfolio of businesses with a view to maximising the overall performance of the organisation. A second area of excellence is information systems – the constant monitoring of performance of each business unit in order to detect and eliminate negative performance as quickly as possible.

### 3.4 VAAL ECONOMIC FORUM

The Lekoa Vaal Economic Forum was an initiative of the Lekoa-Vaal Metropolitan Council. One of the aims was to establish a vehicle for the development of businesses in the Vaal Triangle. However, the initiative failed because of a lack of interest and commitment from the general community.



### 3.5 INDUSTRIAL REGENERATION

The Vaal Triangle was identified as one of the focus areas of the Gauteng Special Economic Zone Programme (GSEZP). The programme, which now forms part of Gauteng's *Blue IQ* Programme, involved a strategic intervention that was aligned with the Spatial Development Initiative (SDI) criterion for opening up the economic potential in areas with under-utilised industrial or infrastructural capacity by targeting strategic industrial assets that are important to the growth of the

regional economy. More particularly, the intervention involved the design and implementation of industrial regeneration projects.

In the year 2000, the Department of Trade and Industry commissioned a preliminary investigation into the industrial regeneration potential of the industrial sector in the Vaal Triangle (Bloch and Dorfling, 2000). The report recommended that:

- Stakeholders be shown the advantages of industrial regeneration in the Vaal Triangle, as it is important for them to understand the gravity of the current economic situation and the need for the development of a strategy with goals common to each role player;
- The region be marketed to potentially interested industrialists;
- A regional incentives package be worked out for the Vaal Triangle;
- The existing businesses be supported, especially in terms of their need for marketing, access to finance, and technical support;
- New small businesses and manufacturing businesses be stimulated.

For the regeneration of the industrial sector in the Vaal Triangle and a programme of regeneration to materialise, a local initiative is now required. In the first place it will be important to show stakeholders the advantages of regeneration as well as the gravity of the current situation, and in the second place the intention is to convince government that the leadership in the Vaal Triangle is now serious and wants delivery.

## 3.6 ESTABLISHMENT OF A MANUFACTURING ADVISORY CENTRE (VAALMAC)

The establishment of manufacturing advisory centres (MACs) is an initiative of the Department of Trade and Industry. It has as goal the expansion of South Africa's small manufacturing sector and the improvement in the competitiveness and growth of existing small- and medium-sized manufacturing firms. The MACs will draw on resources and expertise of relevant service providers to assist manufacturers to become locally and internationally competitive. The South African MAC model is unique and perhaps the most advanced in the world. It was developed by NAMAC (national body for the establishment of MACs) through drawing on the experience and expertise of the CSIR, Ntsika, National Productivity Institute (NPI) and Danish International Development Aid (DANIDA) by studying similar programmes in various countries abroad. The final model was tailored and refined to suit local conditions using all available inputs. The MAC programme has some of the best trained industrial advisors who rely on the most cutting-edge diagnostic technology in the country. They carry out diagnostic assessments and also provide training, development, business links and information needs to SMEs (*Blue IQ* website, 2001).

A total of three MACs will be established in Gauteng, namely in the East Rand, West Rand and the Vaal Triangle. A total of about R1.7-billion will be spent to establish these MACs, each of which take about 48 weeks to establish. NAMAC recently appointed a Provincial Manager. After the advisory board is in place, the process for the establishment of a Vaalmac centre can continue. The advisory board will decide together with the Provincial Manager on issues regarding the location of the Vaalmac centre, as well as a manager and staff complement.

The establishment of Vaalmac is currently the sole concrete initiative of the provincial government in the regeneration of the Vaal Triangle economy. The Gauteng provincial government has been instrumental in the setting up of Gaumac (the provincial body), and is working closely with NAMAC. (Mhlongo, 2001).

## 3.7 UPGRADING OF THE VEREENIGIN AIRPORTTOINTERNATIONAL STATUS

The main purpose of the upgrading programme is to develop and upgrade the airport so that it can be strategically positioned as a major player in the freight handling sector. It is envisaged that the airport will serve both the national and international arena with a special emphasis on flying cargo to other parts of Africa. It is also envisaged that the airport will be in a position to accommodate planes with 80 ton loading capacity. Various factors have contributed to the investigation into the potential development of an international airport in the Vaal Triangle, including:

- the concept of a niche airport to serve medium-heavy and heavy aircraft into and from Sub-Saharan Africa;
- the local demand for mainly cargo facilities;
- the lack of specific facilities at Johannesburg International Airport; and,
- the expensive price structures at Johannesburg International Airport.

During the 1989-1991 period studies were conducted to test the feasibility of developing the Vereeniging Airport into an international facility. The last study, finalised in September 1991, showed that sufficient demand for this expansion would only realise during 1998-1999.

In February 1998, Sky Freedom Aviation Consultants were approached by the Mayor of the Lekoa Vaal Metropolitan Council to investigate the feasibility of expanding one of the airfields in its region into a bigger national and international airport. The following year the preliminary findings were presented to the Greater Metropolitan Council. The study concluded that the Vereeniging Airport be developed.

Factors towards this decision are:

1) geographical position (central in the Vaal Triangle);
2) existing road and rail infrastructure at this airport;
3) relatively under-developed urban area in the proposed approach and take-off slope;
4) availability of industrial land around the airport;
5) ease of radar control under the Johannesburg Terminal Movement Area (JHB TMA);
6) establishment of the K11, K77, PWV20 route (East-West); and,
7) support demonstrated by the Local Council in this effort.



## 3.8 ESTABLISHMENT OF AN INDUSTRIAL DEVELOPMENT ZONE (IDZ)

One of the measures offered by the South African Department of Trade and Industry that is specifically aimed at encouraging the international competitiveness of the domestic manufacturing sector is the industrial development zone (IDZ) programme. IDZs are planned as purpose-built industrial estates linked to an international port or airport in which quality infrastructure and expedited customs procedures are coupled with unique duty-free operating environments suited to export-oriented production. It is envisaged that the private sector will build and operate IDZs. Government will license operators to develop and run the IDZs, provide enterprise support measures, minimise red tape and provide efficient services to enterprises within an IDZ (The Enterprise Organisation, 2001).

There are two zones of operation planned for IDZs, namely a Customs Secured Area (CSA), and an Industries and Services Area (ISA). The former is a delimited area with entrance and exit points controlled by customs personnel, while the latter involves leading edge industrial and office park environments adjacent to CSAs, typically occupied by service providers to CSA enterprises or industries beneficiating local raw materials (The Enterprise Organisation, 2001). An IDZ is thus aimed at export oriented manufacturing and processing and incorporates the following features:

- a duty-free status for imported raw materials / components;
- national and local government incentives;
- is located adjacent to an airport or port to facilitate easy import and exports of goods;
- provides the latest information technology for global communications;
- provides human resource development services, an industrial relations environment, world-class infrastructure, and adherence to environmental standards;
- is managed by an IDZ company to streamline administration.

The plan is for government to first designate areas suitable for IDZs. Prospective IDZ operator companies will then be able to apply for permits to develop and to operate an IDZ. Government-sponsored feasibility studies have already been conducted on a number of potential port and airport locations at which IDZs may be established. This preparatory phase combined with the newly approved legal framework has laid the foundation for business and investors to use the programme to develop IDZs as platforms for improved global competitiveness (The Enterprise Organisation, 2001).

Local stakeholders believe that the main purpose of the establishment and development of an IDZ in the Vaal Triangle would be to regenerate the local economy by offering local and international firms the possibility to invest in the area. It is envisaged that a Vaal Triangle IDZ would be supportive both to the local industries, organic agricultural programmes, and the airport. There is also some speculation that this zone could accommodate other projects related to the Tax Recapitalisation Programme and its consequent downstream secondary initiatives.

One of the most serious constraints in regard to the establishment of an industrial development zone in the Vaal Triangle, however, is that the area first needs to be identified and designated by national government as an industrial development zone. This has not happened as yet, although Vaal Triangle stakeholders hold the view that an IDZ should be established, and are themselves investigating the viability of such a project. It is therefore merely a proposal at this stage that an IDZ could "kickstart" the economy as long as downstream industry could be attracted.

### 3.9 NATIONAL ORGANIC AGRICULTURE AND HEALING (NOAH) PROGRAMME

The main purpose of the NOAH programme is the production of organic and environmentally-friendly fresh produce. This produce is earmarked for both the national and international markets. It is envisaged that the programme will employ state of the art technologically advanced, environmentally-friendly processes.

### 3.10 LEADERSHIP SUMMITS (PUK)

A few leaders' summits were held on job creation by the managing directors / managers of a large group of industries. The summits were organized by the Potchefstroom University for CHE. The main recommendations stemming from these summits were that:

- Manufacturing should be encouraged. Big industries should become more globally competitive. Existing manufacturing should proceed with current initiatives. Downstream (steel and other) enterprises should be established. Low-technology SMME's should be established in order to create more jobs. A forum/network should be established among businesses.
- The river should be more effectively utilised.
- The overall environment should be made more attractive. An environmental action plan should be created.
- The Vaal Triangle should be properly marketed on a national, regional and local level.

- More support from government is needed.
- There is a serious need for the synchronisation and co-ordination of existing research activities and other regional development initiatives in the Vaal Triangle.

## 3.11 TOURISM AND ENTERTAINMENT

Thus far the development of attractions (Riverfront, hotels and casino) has not managed to attract the large numbers of customers from outside the region required in order to significantly stimulate local income and employment. Only a limited number of day-visitors from Johannesburg could be attracted, while most of the customers thus far have been drawn from within the Vaal Triangle itself. Some factors hindering the development of the sector mentioned by stakeholders are:

A lack of an integrated marketing strategy.

The entrance routes to tourism & entertainment attractions are not indicated properly (signage).

Entrance routes are littered, dirty & untidy (for example the old Golden highway, which is one of the major access routes to the Emerald safari resort & casino, the Riverside sun hotel.)

The Vaalriver is polluted.

Although the tourism and entertainment sector currently forms a relatively small part of the local economy, the sector has particularly high employment and income multipliers. The sector has the potential to create job opportunities for a large number of unemployed in the Vaal Triangle. The sector is also more accessible for the poor and relatively unskilled, who form a large part of the Vaal Triangle population. It therefore makes sense to try to attract both overseas tourists, as well as weekend visitors from nearby Johannesburg and Pretoria.

With regard to the overseas visitors, market research shows that there is an interest in experiencing the best Africa has to offer - wildlife and culture - within a 60 minute driving distance from Johannesburg International Airport. Further, families in the Sandton, Midrand and Pretoria areas have a real need for quality, varied and outdoor family recreation, especially over weekends. It has thus been suggested that the Vaal Triangle position itself as "The Cradle or Gateway of the African Renaissance". This centre could be located on prime commercial land along the banks of the Vaal River, featuring "world-class African attractions". The attractions could include game drives, safaris, bird sanctuaries, township tours, various water-based activities, African curios and arts and crafts, theme parks, cultural villages, and African fashion. In this way the needs of visitors could be fulfilled, such as quality family entertainment; a 'real' African experience ('Big 5' in the bush, African culture and cuisine); convenient accessible venues; clean, secure facilities and parking; affordable and value-for-money attractions; varied and diverse entertainment offerings; and aspirational venues 'where my type hang out' (Brand Scan and Visual Volcano Advertising, 2000). Linked to the Sharpeville Memorial Initiative and the signing of the Constitution and the Peace Treaty of 1902, it is believed that this sector may have the potential to attract tourists from overseas. Emphasis should therefore be placed on the development of a historical museum where these events are properly exhibited and marketed in such a manner that will draw overseas tourists.

A high priority should be the cleaning up of the environment, especially access routes and the Vaal river. This will prevent the deterioration of the existing entertainment facilities and tourist attractions, etc. With this in place, an integrated, well designed development of the tourism and entertainment sector in the Vaal Triangle may have a large multiplier effect on the local economy in terms of employment creation and income generation. This sector may also contribute to change the negative image of the Vaal Triangle, making local residents proud of their region.



## 3.12 THE MARKETING OF THE VAAL TRIANGLE

In the regeneration of the Vaal Triangle industries report commissioned by the Department of Trade and Industry (Bloch and Dorfling, 2000), the Leadership Summit and several other reports, significant emphasis was placed on the marketing of the Vaal Triangle as a **Clean and Safe Prime Business Location in Gauteng with high-income housing, entertainment and tourism along the Vaal River to increase attractiveness.**

The Vaal Research Group made an effort to market the Vaal Triangle with its report "Prospects for Trade and Investment in South Africa's Largest Industrial Hub" (See Report No.3). In order to market the Vaal Triangle more effectively, a product chain analysis needs to be done to show possible areas for investment. Furthermore, proper incentive schemes need to be formulated and marketed in order to attract new investment. The marketing should be done on a far larger scale (see example of East London in **Chapter 9**), and in an integrated fashion.

## 3.13 RESEARCH SUPPORT

The Vaal Research Group was formed by Vista University, PUK & VTT (in collaboration with Tilburg University in the Netherlands and Molde University in Norway) to conduct and co-ordinate research in the Vaal Triangle for the benefit of the people, institutions, businesses, industries and local government. Research on different aspects of the Vaal Triangle economy has regularly been undertaken since 1987 (23 research reports on aspects of the Vaal Triangle economy were published between 1987 and 2001). The purpose of these research reports has been to keep track of the state of the local economy and to convince local, provincial and national government of the need for intervention to reduce unemployment and poverty rates in the Vaal Triangle. The results of the research have been used in several reports, including the report commissioned in 2000 by the Department of Trade and Industry on the potential for the regeneration of the Vaal Triangle industrial sector.

## 3.14 CONCLUSION

The number of initiatives that are aimed at regenerating the Vaal Triangle's economy indicate that there is a significant degree of thought and effort being expended at the local level. Each of the twelve initiatives described in this chapter contribute elements towards the attraction and support of business, as well as improving the general business climate. Considering that the manufacturing sector remains the most dominant economic sector in the area, the industrial regeneration initiative is a critical component in influencing the health of the economy more generally. In a similar vein, the establishment of an industrial development zone, Vaalmac, and ChemCity will also add to the support and growth of the manufacturing sector. The initiatives aimed at encouraging the growth of the agricultural, tourism and entertainment sectors are important in terms of aiming at diversifying the economy. Furthermore, the upgrading of the Vereeniging Airport to international status, the marketing of the Vaal Triangle initiative, and general collaborative research efforts, can make considerable inroads in terms of developing the economy in a more general way. With an integrating working spirit, there will be more of a chance to achieve the following:

- enhancement in terms of the expected delivery of services and goods from the local government;
- improvement of manufacturing business environments to meet the needs of existing firms within a global economy;
- implementation of such improvements in such a way as to make industrial environments more attractive for new investment or for re-investment; and
- provision of well-coordinated and effective in-place competitiveness-enhancement to existing companies and start-up support to new entrepreneurs, drawing on government supply-side support measures, and the institutional capacity of local public and private sectors.

# 4. FACTORS HAMPERING NEW INVESTMENT IN THE VAAL TRIANGLE

*What are the restrictive factors that are hampering new investments? The Vaal Research Group should compile a comprehensive report on the opinions of industrial and business leaders in the Vaal Triangle and general information on aspects that are making new investments unattractive.*

## 4.1 INTRODUCTION

Despite the number of initiatives that have been undertaken in an attempt to regenerate the local economy, scant attention has until now been given by local stakeholders to the development of an official industrial strategy involving investment promotion and incentives package. This is critical considering the continuing dominance of the manufacturing sector (albeit in decline) in the Vaal Triangle. Further, there is limited support on offer to existing and potential businesses, with small business support services being particularly lacking. The general business climate is not especially conducive to the attraction of industrial or other investors, as is evidenced by a number of factors.

In a recent survey, manufacturers were probed to suggest measures that would make the Vaal Triangle more attractive to new investors (Bloch and Dorfling, 2000). The majority of firms interviewed commented that the "basics needed to be right". For instance, general maintenance of infrastructure and good service provision, as well as controlling crime and pollution were considered necessary, but only in combination with tax incentives sufficient to warrant new capital investment in the Vaal Triangle. Some local industrialists hold the perception that economic growth in South Africa - as well as on a global level - is expected to slow down, thus negatively impacting on the local area; however, it is felt that there are a number of factors that could be changed at the local level that are considered to be curtailing the interest of potentially interested investors. The chief factors hampering new investment in the Vaal Triangle are described in the sections that follow.

## 4.2 DECLINE OF CHIEF INDUSTRIAL SECTORS

Over the past few years, there has been a general downscaling of major industries in the Vaal Triangle, with a high level of retrenchment. In particular, the so-called 'backbone' chemical and steel industrial sectors in the area have been seriously impacted by restructuring. The growth of the steel industry has been seriously impacted in the world economy by a chronic decline in steel's intensity of use. Recent technological improvements have resulted in high steel inventories and lower demand in the world market. The steel industry has experienced the most damaging commodity cycle on record because of declining international prices, accelerating declines in steel consumption both locally and internationally, competition from cheap imports, and a severe fall in export steel prices.

## 4.3 LOCATIONAL COST DISADVANTAGE

The distance from the ports of exportation is considered to be a serious disadvantage. Large firms lament that they are "stuck" in the Vaal Triangle as they cannot transport their products cost-effectively in a rising transport costs environment. This is obviously a more serious problem for firms that may capture markets outside the Vaal Triangle, but source their inputs inside the area. They would prefer to locate in port towns. These increasing transport costs are one of the major constraints to the growth of the manufacturing sector.



## 4.4 LACK OF BUSINESS SUPPORT

Business support is severely lacking in the Region, with 65 percent of industrialists indicating in a recent survey (Bloch and Dorfling, 2000) that they would be interested in receiving various kinds of external assistance. Marketing, access to finance, and technical and other kinds of training and advice are areas that need attention in the Vaal Triangle. Smaller firms are interested in support in the fields of marketing and product development while large firms are more concerned about stricter import control and more flexible labour legislation. Further constraints to industrial regeneration are

the limited resources provided for small business support structures, vital to a Region with a high rate of unemployment and further retrenchments on the cards. Most of the Vaal Triangle manufacturers face an increasingly competitive market, a situation which requires strong marketing support and easy access to finance for small and medium enterprises (Bloch and Dorfling, 2000).

## 4.5 POOR QUALITY OF LIFE: POLLUTION, POVERTY, CRIME, AND UNEMPLOYMENT

The quality of life in the Vaal Triangle is negatively impacted by pollution, crime, poverty, and relatively high unemployment levels. In the year 2000, more than 42 percent of African households were living below the poverty line. The high population growth rate together with low affordability has led to large backlogs in housing, urban infrastructure and community services. Although air pollution levels are apparently within international standards, they have a negative impact on the health of the communities. The traditionally disadvantaged communities are particularly affected during the winter when smoke and sulphur levels are high because of heating and cooking methods (Booz-Allen and Hamilton (South Africa) Ltd, 1996). Although crime levels are lower than in the Witwatersrand, crime is on the increase in the Vaal Triangle. Currently industrialists in the area deal with the crime situation by investing in private security devices and personnel. Some firms believe that more visible policing would reduce crime levels, and in Vereeniging there are plans at local council level to install surveillance cameras in the central business district. Rising levels of crime are associated with the high level of unemployment in the area.

## 4.6 SKILLS SHORTAGES

Eighty percent of African workers are either semi-skilled or low skilled, with only 15 percent being highly skilled (Bloch and Dorfling, 2000). With this population group making up most of the workforce, there is a serious shortage of relevant skills.

Although there are a number of educational and training institutions in the Vaal Triangle offering technical training, they clearly are not able to cope with the demand for certain skills. One of the areas seriously lacking is that of entrepreneurial training. Further, there is no institution providing technical support and advice to the small business once it is up and running. In terms of encouraging innovation it is important that this kind of support is available, and large industry also has something to offer in terms of experience and funding.

## 4.7 LACK OF A STRONG REGIONAL MARKETING BODY

The chief constraints relating to Vaal Triangle industrial regeneration in terms of business attraction methods include the lack of both an official regional incentive scheme and an industrial marketing body. Linked to this is the absence of a regional industrial strategy, which is important in terms of planning for the optimal use of resources, and also for potentially interested investors as well as existing local industries to have faith in the Vaal Triangle's economy despite the serious effects of industrial restructuring in the steel and chemical industries.

## 4.8 ABSENCE OF A STRONG REGIONAL DECISION-MAKING BODY

A critical stumbling block is the failure of some of the key stakeholders in economic development to be prepared to work together, and the absence of a strong decision-making body. Considerable confusion and ideological divergence among leaders create uncertainty and inhibit comprehensive planning.

## 4.9 POOR MAINTENANCE OF INFRASTRUCTURE AND SERVICE PROVISION

A lack of resources within local councils has led to the freezing of posts, limiting the ability of planners to initiate capital projects. In a recent survey of local industrialists' opinions, local government was perceived to be incapable of "reviving" the Vaal Triangle (Bloch and Dorfling, 2000). The lack of funds and deterioration of service provision are the most mentioned indicators here.

Municipal services are considered highly inadequate, despite increasing costs of rates and taxes. Poor provision of services and maintenance of infrastructure cause higher costs to manufacturing firms in the Vaal Triangle. The physical deterioration of public areas is a serious problem. There is a general attitude of neglect by the municipality, requiring the public to take action. Neighbourhoods are considered to be falling apart, while the CBDs, and low-cost housing zones are overcrowded and deteriorating.

Linked to this is the fact that many local stakeholders perceive national government to be less than interested in the development of the Vaal Triangle economy (as indicated by the Vaal Triangle's exclusion from major development plans), while local councillors are perceived to have limited understanding of the gravity of the current economic situation.

## 4.10 CONCLUSION

Although there are a number of important factors that are hampering the attraction of new investment into the Vaal Triangle, and thus constraining attempts to regenerate the economy, the challenge for local stakeholders is to consider ways of reducing the impact of those factors that can be influenced at a local level. By considering the factors that make the area an attractive one, as discussed in **Chapter Five**, it is possible to formulate strategies and actions leading to investment attraction as well as the expansion of existing economic activities.

# 5. WHAT THE VAAL TRIANGLE CAN OFFER NEW INVESTORS

*How can the Vaal Triangle be a magnet for new investors? The Vaal Research Group should compile a comprehensive report on. the infrastructure, transport facilities, development costs, service costs, vacant land, industrial space (buildings), safety and security, environmental aspects, local incentives and the human resources skills to attract new investors to the Vaal Triangle.*

## 5.1 INTRODUCTION

The chief offerings available to potentially interested investors are perhaps best reflected in the fact that despite the economic downturn, local manufacturers have enjoyed growth, albeit "jobless", over the past five years (Bloch and Dorfling, 2000). An industrial strategy can be built around the experiences of these enterprises and around the fact that the Vaal Triangle has the largest steel industry and chemicals agglomeration in the country. In fact, the resources and expertise of larger business in the area need to be tapped, particularly in terms of marketing. Besides the advantages for a manufacturer interested in locating in the area, the quality of life aspects of living in the Vaal Triangle need to be marketed. There have been a number of initiatives aimed at regenerating the local economy, and these are also important in terms of improving perceptions of the Vaal Triangle. For instance, the upgrading of the Vereeniging Airport to become cargo-based is viewed as an important opportunity. A start has been made with the introduction of small business support structures in the form of local business service centres and Vaalmac.

In a recent survey of the opinions of local industrialists, low traffic congestion, good road networks and availability of premises and labour, were named as major advantages of the Vaal Triangle as a business location (Bloch and Dorfling, 2000). In this chapter the main 'selling points' of the Vaal Triangle are described, including: good infrastructure, reasonable development costs, lower crime rates than those experienced in other areas of Gauteng, attempts to deal with pollution, the development of local incentives, a relatively highly skilled workforce, and a good quality of life.

## 5.2 INFRASTRUCTURE

The quality of the infrastructure (including rail access, road access, future road proposals, public transport and airports) in the Vaal Triangle is considered by many to be one of the most important drawcards. A recent survey among manufacturers shows that 47 percent considered the Vaal Triangle to have a low traffic congestion and good road networks (Bloch and Dorfling, 2000).

The industrial areas are endowed with good rail and road transportation links for both passengers and goods. Rail has been the most important of these historically, but since the 1960s rail has been complemented by a comprehensive system of dual carriage-ways. The dependence on road-based transport and long travel distances between activity nodes in the region has resulted in the road system being the fundamental link between land uses. The rail network is only of secondary importance. The Vaal Triangle is endowed with excellent road infrastructure at a national and regional scale; however, there is evidence that the roads are not being adequately maintained. There are two airports in the region, one in Vereeniging and a smaller facility in Vanderbijlpark. At present the current status of the Vereeniging Airport is that of a public airport, open 24 hours a day. Plans to develop an international airport at Vereeniging are currently being driven by the Sedibeng District Council and an application has been made for an industrial development zone. Immigration facilities (in terms of the airport) have been approved by the Department of Home Affairs, but customs and excise facilities have not yet been approved.

## 5.3 DEVELOPMENT COSTS

This section covers land costs, service costs, and costs of vacant land and industrial space. Local councils can play an important role in determining the cost of rates and services. One of the significant opportunities existing in the industrial areas of the Vaal Triangle is the competitive cost of land. This competitive edge should be complemented by competitive rates and services. The area is a particularly attractive location for firms looking for large amounts of cheap space - such as the metals sector and building materials sector.

The rental figures in **Table 5.1** demonstrate costs in the Vaal Triangle industrial areas relative to costs in other industrial areas of Gauteng. Rental costs in the Vaal Triangle are about half of those in Kya Sands, Strijdom Park, and Midrand, and similar to those in the East Rand. Unimproved land costs between R10 per $m^2$ for large pieces of land and R32 per $m^2$ for small pieces of land. Unimproved land costs in Metsimaholo are considerably higher at about R50 per $m^2$.

Table 5.1 Rental costs in selected industrial areas of Gauteng

| | |
|---|---|
| **Duncanville (Vaal Triangle)** | R5 - 10 per $m^2$ |
| **Germiston** | R7 - R11 per $m^2$ |
| **Kya Sands** | R14 - R 18 per $m^2$ |
| **Strijdom Park** | R16 - R21 per $m^2$ |
| **Midrand High Tech Strip** | R18 - R21 per $m^2$ |

*Source: Bloch and Dorfling, 2000.*

Table 5.2 Service charges in Vereeniging, Vanderbijlpark and Sasolburg

| | Vereenigin g | Vanderbijlpark | Sasolbur g | Johannesbur g | Midrand |
|---|---|---|---|---|---|
| Water: Basic | R26,60 | R27,38 | R23,10 | - | - |
| Water: consumpti on | R3,857 per kl | R3,73 up to 30kl R4,45 for 30-2900kl R1,85 over 2900kl | R2,47 per kl | R5,00 per kl | R4,62 per kl |
| Electricity: Basic | R393,80 per month | R393,80 per month | Buy direct from Sasol/ Eskom | R78,84 per month | Range between R178,80 and R295,00 |
| Electricity: Consumpti on | R56,48 per kW | R56,48 per kW | Buy direct from Sasol/ Eskom | kWh 32,83 cents per unit | KWh 23,25 cents per unit |
| Refuse | 0,117/rand calculated on property value | 0,079/rand calculated on property value | R11,40 per cubic metre to deliver to dump | 85l bins collected weekly R80/m 240l bins collected twice a week R200/m | Bin rentals range from R98 to R394 per month; Charges range from R173/lift to R616 per lift based on bin size |

| | | | | | |
|---|---|---|---|---|---|
| RSC Levies | 0,31120% of salary 0,140448% of turnover | 0,31120% of salary 0,1404448% of turnover | 0,34485% of salary 0,13794% of turnover | - | - |
| Rates | 0,1107 in rand | - | 0,2 in rand for heavy industry 0,13 in rand for light industry | - | 0,0686 in rand |
| Sewerage | Sliding scale | R20,72 per point and sliding scale | R30,15 | - | - |

*Source: Local Councils, 2000, in Bloch and Dorfling, 2000.*

There is, however, a disparity of service charges across the Vaal Triangle, as indicated in **Table 5.2**. The service charges in Vereeniging, Vanderbijlpark and Sasolburg are shown, compared to Johannesburg and Midrand.

In order to incentivise industrial development in Metsimaholo there has been a recommendation that the Council should exempt new industrial development from land tax for five years and should sell electricity at cost price to industry. A large amount of vacant land in Metsimaholo is owned by Sasol. There is an initiative by Sasol to establish an industrial park - ChemCity - with the intention of attracting small and medium chemical industries that would benefit from proximity to existing industries. There is also another initiative by a private developer to establish a new industrial township - Naledi. So far, township development rights have been procured and services are being installed.

## 5.4 SAFETY AND SECURITY

A factor which investors are certain to find attractive is that the level of crime in the Vaal Triangle is much lower than that of many other areas in Gauteng (Slabbert, 2001). Despite this, it should be noted that crime is a major concern of many businessmen in the Vaal Triangle industrial areas, the increasing number of road closures in order to control access effectively privatises public space and has the effect of displacing crime. Other ways to deal with crime are to ensure legibility and well-used streets, rather than *cul-de sacs*, as this all contributes to safer environments. Adequate street lighting can also enhance security (Bloch and Dorfling, 2000).

## 5.5 ENVIRONMENTAL ASPECTS

Pollution of both air and water are major problems in the Vaal Triangle. However, environmental quality is a key development theme in the area, together with the recognition that it requires serious attention. Air pollution is below the international standard, but exceeds the level that can be harmful to health. Although the Emfuleni Municipal Council does not have an official environmental policy, great progress has been made in this regard at national and provincial level. Policies of the Department of Environmental Affairs have, over recent years, concentrated on South Africa's return to the international fold and on the responsibilities involved. In order to promote sustainable development, the National Environmental Management Act (107 of 1998) requires every national department exercising functions which may affect the environment, and every province, to prepare an environmental implementation plan every four years.

## 5.6 LOCAL INCENTIVES

Industrial incentives are offered by the local councils, although these are often on an *ad hoc* basis and/or are still in the process of being formalised. As in other parts of the country, local authorities do not have much scope in terms of the incentive package they may offer to potential industrialists. The former Vereeniging-Kopanong Metropolitan Local Council offered incentives on an *ad-hoc* basis – for example reduced electricity rates and land prices, and the postponement of rates and taxes for a certain period. The former Western Vaal Metropolitan Local Council provided a reduction of different percentages on building plan fees, rates and taxes, water and sanitation fees. The former Sasolburg Transitional Local Council also had an *ad-hoc* policy on investment incentives (Local Councils and Vaal Research Group, 2000). However, that there is recognition of the need to formulate attractive local incentives of various kinds (not necessarily direct financial incentives) is reflected by a joint promotion and marketing initiative of the Northern Free State District Council and Sasol Chemical Industries to attract industry and entrepreneurs into the town. The strategy is based on raw material, intermediate products and chemical products available from local manufacturers and that can be used as feeding material for downstream manufacturing and processing. It has been recommended that the local authority adopt a policy to offer incentives to promote economic development in Sasolburg (Sasolburg Transitional Local Council, 2000), and that this policy should:-

- offer the levying of a zero rate tariff in respect of land tax for a period of five years from the date any undeveloped land or erven has been bought from the Council (or a developer has been registered in the name of the first buyer or incorporated into the area of jurisdiction of the Council);
- render municipal services with regard to water provision, electricity, sewerage disposal and refuse removal at cost price for the first five years from the date the first buyers of land or an erf from this local authority or a developer, requests such services (pay connection fees);
- provide assistance to entrepreneurs who buy erven in Sasolburg in accessing state and parastatal incentives by providing information and application forms, assisting in the preparation and submitting of applications, and support of such applications in writing;
- allocate the duty of obtaining the relevant information regarding these incentives to the section Urban Planning and Economic Development;
- grant an amount of R40,000.00 on an annual basis to advertise the incentive policy of the Transitional Local Council;
- appoint an incentive committee to consider applications for incentives and that this committee be awarded delegated powers to consider and finalise such applications.

It is unfortunate that the incentives offered by the local councils are currently insufficient to attract new investment or maintain existing investment. It is therefore recognised that new incentives need to be investigated, particularly in the light of factors hampering investment that can be influenced at a local level. Further, the Vaal Triangle is considered to offer good governance characterised by less bureaucratic procedures, competence and integrity of democratically elected leaders. There is a commitment on the part of the public authorities to assure general maintenance of infrastructure, good services provision, crime and pollution control, active marketing of the Vaal Triangle as business location and tax incentives.

## 5.7 HUMAN RESOURCES

The Vaal Triangle has a higher percentage of the population that is educated than the rest of the country. Although this is of benefit to potential investors, there is a vast mass of unskilled people – particularly in the township areas. In order for the relevant skills to be available to the local business sector and to reduce unemployment levels, it is critical that the local institutions are able to assess the nature and extent of need for such skills – and to offer training on a timely basis. Of interest to potential investors is the fact that the area is considered to house well-equipped training, educational, as well as health facilities. In fact, the region has three tertiary educational institutions (Vaal Triangle Technikon, Vaal Campus of Potchefstroom University and Vista University); three technical colleges; and one technical training centre. There are four private hospitals (Medicross, Medi-clinic, Vaal-Med and Naledi-Kanyenzi) and two public hospitals (Sasolburg hospital and Sebokeng Hospital).

## 5.8 QUALITY OF LIFE

It is felt that the Vaal Triangle can be marketed as the area which offers the best of both worlds, namely it is close to the chief business mecca, and involves good country living (Vaalgro, 2001). The Vaal River offers quality entertainment, and there have been suggestions to develop high-income properties along the river. Property prices in the Vaal Triangle are considered much lower than the Greater Johannesburg area. According to a recent survey, many industrialists believe that "doing business' and "living" in the Vaal Triangle has become worse over the past five years, but the region is considered to be an "average" business location with relatively good formal residential areas (Bloch and Dorfling, 2000).

## 5.9 CONCLUSION

There are a number of important advantages offered by the Vaal Triangle to those interested in investing in the area. The growth that has been experienced by manufacturers in the area over the last five years is perhaps the best 'selling point', but the number and nature of local economic regeneration initiatives is also very encouraging. The excellent transport infrastructure is a particular strength of the area, as is the reasonable cost of land. There are a number of other reasons that make the Vaal Triangle an attraction, most of which are discussed in this chapter, and this particular set of factors will largely influence the nature of investment that should be attracted into the area. In the following chapter, the kinds of businesses that are likely to fit best with the characteristics of the Vaal Triangle are presented.

# 6. KINDS OF BUSINESSES/INDUSTRIES THAT CAN BE ATTRACTED TO THE VAAL TRIANGLE

*What kind of new industries and business can be attracted to the Vaal Triangle? The Vaal Research Group should compile a comprehensive report on possible upstream and downstream industries, as well as new industries to increase the diversity of the manufacturing sector in the region. The reason is that the economy of the Vaal Triangle is skewed due to the large portion of the steel manufacturing industry in the gross regional production figures. Value adding must be the key word in the establishing of new enterprises. The establishment of labour-intensive enterprises is also important to address the serious issue of unemployment in the region.*



## 6.1 INTRODUCTION

With reference to various economic studies undertaken in the region, it is evident that the regeneration of the Vaal Triangle economy should be based mostly on three major economic sectors, namely: (1) manufacturing; (2) tourism and entertainment related activities; and, (3) agro-industry. While the manufacturing sector remains the most dominant economic sector in the area, even experiencing growth over the last five years, it has been shedding jobs on a significant scale. It has also shown signs of a decline over time, thus making it important to encourage the diversification of the local economy.

## 6.2 MANUFACTURING

Considering that the performance of the Vaal Triangle economy remains strongly reliant on the manufacturing sector, it has been argued that the "manufacturing remains the key sector on which efforts to revitalise the economy of the Vaal Triangle need to be focused" (Bloch and Dorfling, 2000:20).

Currently the Vaal Triangle economy relies fundamentally on the following large industrial operators:

- ISCOR Flat Products (Vanderbijlpark Works) and Speciality Steels (Vereeninging plant). The Vanderbijlpark Works is the country's largest integrated steel works, with Flat Products producing more than 70 percent of ISCOR Steel's liquid steel, and supplying more than 80 percent of South Africa's local flat product demand. ISCOR Speciality Steel produces a number of specialised steel products including seamless tubes, springs steel, alloy steel and forgings (Slabbert and Pelupessy, 2000).
- The ferro-manganese plant of Samancor. Put together with Iscor Steel plants, they comprise the main large base metal firms in the Vaal Triangle.
- SASOL, which is the largest company representing the chemical industry in the Vaal Triangle. SASOL is responsible for 40 percent of South Africa's liquid fuels as well as for producing most of the country's chemical building blocks (oil, gas, fertilizers, carbon and tar products, solvents, phenolics) complemented by interests in technology development. In fact, SASOL Chemical Industries in Sasolburg manufactures more than 120 chemical products, which are sold inside South Africa as well as in North America and North-West Europe. These products are mainly derived from coal (Slabbert and Pelupessy, 2000).
-

Because of large amounts of cheap space, it has been determined that industries involved in the metal sector and building sector could locate in the Vaal Triangle with relative ease (Bloch and Dorfling, 2000). Vanderbijlpark can host secondary industries linked to the steel sector. SASOL owns a large amount of vacant land in Sasolburg has established a ChemCity, which is planned to attract small and medium-sized chemical industries. It is felt that these industries will benefit from the close proximity to existing industries.

Recent surveys of some of the local industrialists' opinions show that they do not expect there to be a considerable number of downstream industries locating in the Vaal Triangle, and in the proposed IDZ in particular. Of those industries that may find a niche in the area are high-value, low-volume

chemicals manufacturing firms. Other kinds of industries that can be attracted include: fibre optics, drums, PVL components, telephones, parking meters, industrial vehicles; transport vehicles, service industries (Slabbert, 2001). A product chain analysis could provide more information of the kind of industries that could be attracted to the Vaal Triangle.

## 6.3 TOURISM-RELATED ACTIVITIES

A number of opportunities for the development of tourism-oriented industries exist. Concrete examples include the Sharpeville Memorial Project (including Human Rights Museum), and the development of a recreational tourism resort along the Vaal River. With regard to this sector, the establishment of marketing firms is to be encouraged, as their role would include promoting within and outside South Africa the industrial production of the Vaal Triangle as well as recreational tourism.

With high levels of retrenchments having already taken place, and further retrenchments planned for the future, evidence points to the unlikelihood of industry alone being able to regenerate the local economy. Among local Vaal Triangle stakeholders, there is currently a considerable degree of interest in developing a kind of entertainment industry along the Vaal River. One of the most recent proposals is to develop and market the Vaal Triangle as the "Cradle or Gateway of the African Renaissance" (Emerald Casino has already built a whole complex along the Vaal River - also with this theme). The idea is to develop a theme park as a "window of Africa" (showing the potential of Africa e.g. a kind of replica of the Zimbabwe Ruins, Congo river boats etc) all along the Vaal River in one park. Inbound tourists can then decide what they want to explore further in Africa, while those residing in the Johannesburg area can also be attracted over weekends (Brand Scan and Visual Volcano Advertising, 2000). As the tourism and entertainment sector has high income and employment multipliers, the establishment of a thriving tourism and entertainment sector may have a considerable impact on the employment levels in the Vaal Triangle.

## 6.4 AGRO-INDUSTRY

The Vaal Triangle is not short of land suited to agricultural activities. However, the sector is still one of the smallest sectors in employment terms (Statistics South Africa, 1999). Its contribution to the region's GGP is 1.8 percent although it represents almost a quarter of Gauteng Province's agricultural output (Slabbert and Pelupessy, 2000). Small-scale farming can also be encouraged for those who have lost their jobs and/or those who are unskilled and would thus find it difficult to be employed in the manufacturing sector.

## 6.5 CONCLUSION

Although the manufacturing sector remains the largest and most dominant sector in terms of employment and GGP contribution, it has undergone a significant restructuring process. This has involved the mass shedding of jobs, and local industrialists believe that there is only limited potential for the establishment and growth of new industries in the Vaal Triangle. There are some niche opportunities in the manufacturing sector, but local economic development stakeholders also see potential in other sectors such as the tourism and entertainment, and agro-industry sectors. The challenge will be to market these opportunities to potential investors and entrepreneurs. One of the strengths of the Vaal Triangle in this regard is that it has a high rate of self-employment among all population groups relative to the national rate. In **Chapter 7** the various incentives offered by provincial and national government are discussed, as it is believed that these schemes have been insufficiently tapped. If well researched, such schemes could be more frequently accessed by investors and thus play an important role in terms of regenerating the Vaal Triangle economy.

# 7. INCENTIVES OFFERED BY PROVINCIAL AND NATIONAL GOVERNMENT

*The Vaal Research Group should compile a comprehensive report on the following aspects:*
*which contribution government can make to the regeneration of the Vaal Triangle economy;*
*provide information on specific programmes i.e. the Free State and Gauteng Special Economic Zone Programme, the Spatial Development Initiative of the national Department of Trade and Industry; and*
*provide information on all other possible incentives (like tax exemptions) that are available.*

## 7.1 INTRODUCTION

It is clear that much more should generally be done in South Africa to attract new investors and to compete with other countries. This is also the case in the Vaal Triangle. Other than the emphasis on the regeneration of industry in the area, industrial stakeholders in the area argue that more effort should be expended on other economic sectors such as the development of entertainment facilities and tourist attractions along the Vaal River. Either way, making use of the government incentives on offer is an important issue. The role of government as a facilitator in developing the economy is discussed in this chapter, both at provincial and national level.

## 7.2 GOVERNMENT'S POSSIBLE CONTRIBUTION TO REGENERATION

Besides the involvement of the provincial government in the establishment of the Vaalmac project, there are no other specific projects or programmes being run in the Vaal Triangle. The *Blue IQ* Programme, or what used to be known as the Gauteng Special Economic Zone Programme, that is being run by the Gauteng government involves a number of projects in the Gauteng area. Although there are currently no projects of this nature in the Vaal Triangle, the Economic Policy Unit of the Gauteng provincial government is looking at other ways of becoming involved, some of which may be passed on to *Blue IQ* as concrete proposals (Mhlongo, 2001).

Other than this, the main ways in which provincial and national government can contribute to the regeneration of the Vaal Triangle economy are mainly in the form of incentives, which are also offered in other locales throughout South Africa. After a brief review in the following section of the specific programmes being run by government, such as the *Blue IQ* Programme, these incentives are discussed.

## 7.3 PROGRAMMES SPECIFIC TO THE GAUTENG PROVINCE

The outcome of the Gauteng Special Economic Zone Programme (GSEZP) is the Strategic Economic Infrastructure and Investment Programme, now known as the *Blue IQ* Programme. Each province was invited to take over the Spatial Development Initiative (SDI) projects which ran parallel to the Special Economic Zone Programme; however, there were differences in the manner in which each province have run the programmes due to varying financial viabilities, competencies, and skills.

The response from the Gauteng Provincial Government was to initiate a R1.7-billion programme known as *Blue IQ* (Blue IQ website, 2001). The primary objective of this programme is to invest in economic infrastructure development in ten mega-projects in the areas of tourism, technology, transport and high value-added manufacturing, to create a truly "smart" province. By acting as a dynamic catalyst, the programme is expected to attract some R100-billion in foreign direct investment in the next ten years to the province, thus creating an environment in which local and foreign businesses can prosper and boost job creation opportunities for all South Africans.

Table 7.1 Ten mega-projects spearheaded by *Blue IQ*, 2001

| Technology | Transport | High value-added manufacturing | Tourism |
|---|---|---|---|
| 1 The creation of The Innovation Hub will attract "smart" industries to Gauteng | 2 Gautrain Rapid Rail Link<br>3 The upgrade of JIA and the establishment of an IDZ<br>4 The upgrade o the City Deep Container Depot and IDZ | 5 The expansion of the Gauteng Automotive Cluster<br>6 The regeneratio n of the Wadeville-Alrode Corridor | 7 The marketing of the Cradle of Humankind<br>8 The marketing of the Dinokeng Big Five Reserve/NEGI<br>9 The upgrade of Newtown Cultural Precinct<br>10 The creation of Constitution Hill |

*Source: Blue IQ website, 2001.*

*Blue IQ* works in partnership with business, government departments and other organisations. It is an initiative that is based on a well-researched trade and industrial strategy, taking a three-pronged approach to developing Gauteng into the smart province of South Africa, i.e. (1) creating a sophisticated high value-added manufacturing sector; (2) enabling Gauteng to be the smart province of South Africa; and, (3) developing Gauteng's finance and business service sector.

The ten mega-projects that have been identified to have the potential to make a significant impact on the economy include those in **Table 7.1**. The *Blue IQ* taskforce is accountable to government for delivering specific results on these projects by 2004.

The Gauteng Provincial Government's *Blue IQ* initiative targeting economic infrastructure in the province, has also launched the institutional structure for the first three manufacturing advisory centres in the province – Gaumac. Gaumac is a partnership between Gauteng Provincial Government and the National Co-ordinating Office of Manufacturing Advisory Centres (NAMAC) - a Department of Trade and Industry's implementing agent. Namac is tasked with the establishment of advisory centres in all nine provinces across the country. Two pilot MAC programmes are already up and running – one in Kwa-Zulu Natal (Dumac) and the other in the Eastern Cape (Permac), with Capemac in the Western Cape having been recently launched. These centres provide advisory services to improve the performance of existing SMEs involved in manufacturing and employing just under 200 people. MACs are now established in the East and West Rand as well as the Vaal Triangle (Blue IQ website, 2001).

Although the *Blue IQ* project does not currently run any projects in the Vaal Triangle (other than the establishment of Vaalmac), the study on the potential for industrial regeneration commissioned by the Department of Trade and Industry (Bloch and Dorfling, 2000) has been taken further by the Department of Development Planning and Local Government. This Department has commissioned further studies, in three phases, on economic regeneration in the area - it is hoped that these studies will have the outcome of tabling implementable projects (Morolo, 2001). In fact, the Department has commissioned a study of economic regeneration in two other Gauteng districts as well, with the aim of providing a framework informing the allocation of provincial funding to these areas. The three districts include: the West Rand, Metsweding (includes Bronkhorstspruit, Cullinan etc), and Sedibeng (including the Vaal Triangle). The reason for selecting these three districts is that they are considered to be regions in decline and generally are presumed to have a lack of capacity in terms of driving economic regeneration processes. The Department recognises the importance of forging economic linkages between these districts and the metropolitan areas that are located nearby (Fosi, 2001).

The first phase of the Vaal Triangle study will cover the *status quo* of the economic sectors, while the second involves the identification of the key economic drivers in the region (including the detail for each driver, and projects relating to each driver that can be supported by the province). The last phase involves developing and outlining strategies that will drive economic regeneration, and that are linked with the province. After the end of November 2001, separate studies will be undertaken. These will involve viability and visibility appraisals of identified projects, and assessments of the costing and the nature of support that will be required. By March 2002 these projects will be submitted to the provincial government, and funding motivated. Capacity regarding the institutional vehicles of local councils is considered to be a serious problem by the Department, and there is a need to provide different options in this regard (Fosi, 2001).

On a separate note, a number of stakeholders in the Vaal Triangle are in the process of compiling a business case for the development of an IDZ and a freight airport. Once this has been done, it will be presented to the Gauteng Provincial Government in an attempt to secure funding (Fosi, 2001).

The other provincial initiative for stakeholders from the Vaal Triangle to consider is the CMIP (Consolidated Municipal Infrastructure Programme) run by the National Department of Local and Provincial Government. A certain amount of funding is allocated for infrastructure to each of the provinces, and the provinces are then responsible for the allocation of funds to different regions within the province (this is linked to the IDP process) (Fosi, 2001).



## 7.4 INCENTIVES MADE AVAILABLE BY NATIONAL GOVERNMENT

The Department of Trade and Industry is responsible for administering five key pillars of policy intervention. Each of these is designed to accelerate manufacturing development; included are: investment support, trade facilitation, technology promotion and innovation support, strategic and informational leadership, and contributing to human resources development (Department of Trade and Industry, 1998). The nature of the incentives in **Table 7.2** reflects the Department's commitment to these ends, although it is clear that the incentives apply not only to the manufacturing sector, but also in certain instances to other sectors such as tourism, business services, information and communications technology investments, high-value agricultural projects, agro-processing, recycling, biotechnology industries, aquaculture, and cultural industries (Department of Trade and Industry, 2000).

The chief direct **investment promotion** programmes include the Tax Holiday Scheme, Spatial Development Initiatives, and the Industrial Development Zones. Also included are the World Player Scheme and the Small/Medium Manufacturing Development Programme[3]. The **trade policy** programmes include: Export Marketing and Investment Assistance Scheme (EMIA), and Export Credit and Foreign Investment Reinsurance. **Technology policy** programmes include the National Research and Technology Foresight Programme, the Innovation Fund, the Support Programme for Industrial Innovation (SPII), and the Technology and Human Resources for Industry Programme (THRIP). Included also are an Agency for Technology Transfer, Partnership for Industrial Innovation (PII), Feasibility Study Support (FSS), and proposals for the implementation of Technology Incubators. **Small business promotion policy** involves the creation of an enabling legal and policy environment for SMMEs, and the facilitation and financing of support services to SMMEs. Non-financial support is offered through Ntsika Enterprise Promotion Agency, and includes institutions such as Local Business Service Centres (LBSCs), Business Information Centres, and Tender Advice Centres. Financial support is offered through Khula Enterprise Finance Limited, which operates primarily through Retail Finance Intermediaries (RFIs) (Department of Trade and Industry, 1998). Some of the main initiatives of the **strategic and informational leadership** policy intervention include the "cluster" and Sectoral Strategy initiatives; the Fund for Research into Development, Growth and Equity; the Sectoral Partnership Fund; and the Work Place Challenge. These initiatives are aimed at encouraging manufacturers to develop shared resources to enhance their competitiveness. The proposed **competition policy** is designed to support the objectives of the Department's industrial strategy - namely the promotion of downstream high value-added exports. It includes, for instance, measures to address issues of market structure and ownership

[3] The Department of Trade and Industry has not produced a more recent document similar to **Industrial Policy and Programmes in South Africa (1998)**, thus there may be some new programmes not included in this chapter. However, the list of incentives in **Table 7.2** was published in 2001, and thus should be somewhat more up-to-date.

where these have led to anti-competitive behaviour. **Labour market policy** falls into two main categories, namely productivity/skill enhancing (such as the Skills Development Bill) or industrial relation regulatory (such as the Labour Relations Act, the Basic Conditions of Employment Act, and the Labour Migration Bill) (Department of Trade and Industry, 1998).

There are some **thirty-six incentive schemes** available from the Department of Trade and Industry (DTI), each of which fall into the above-mentioned categories. In order to access these schemes, it is important to understand the goals and outcomes of the Department. The Department's main role is to encourage access to sustainable economic activity and employment through (1) the attraction of higher levels of domestic and foreign investment; (2) increasing market access to foreign investment; and, (3) achieving a fair, efficient and competitive market place for domestic and foreign businesses and consumers. The outcomes that are considered important by the Department include the promotion of small, medium and micro-enterprises, increasing opportunity for black economic empowerment, reducing inequality and poverty, strengthening the international competitiveness of domestic business, developing the SADC region, and servicing the economic citizen (DTI Group Communications, 2001).

Each of the schemes is listed in **Table 7.2**, and it is clear from the access criteria that a number of these could be accessed by new and existing business in the Vaal Triangle. Besides the DTI, there are a number of other institutions from which the schemes can be accessed including: the Industrial Development Corporation (IDC), the South African Revenue Services (SARS), Trade Development Institute (TDI), Khula, IC, EMIA, CITA, National Research Foundation (NRF). The schemes are complex in that they are often offered by various different institutions or divisions and there is some overlapping that may occur; they also require a thorough understanding of their mechanics, and a significant amount of effort and competence is necessary in order to successfully access them.

Table 7.2 Incentives available from the Department of Trade and Industry in South Africa, 2001

| Incentives available from the DTI | Access Criteria |
|---|---|
| Accelerated Depreciation Fund (SARS) | Available countrywide to local and foreign firms establishing new manufacturing plants or expanding existing plants |
| Agro-industries Development Finance (IDC) | An economically viable business plan and minimum financing requirement of R1-million |
| Bridging Finance Scheme (IDC) | Available to entrepreneurs who have been awarded tenders by government; entrepreneurs who have secured contracts for providing services/products to established big, blue chip companies; entrepreneurs with an annual turnover greater than R1-million; and minimum financing requirements of R500,000 |
| Capacity Building Support for Retail Finance Intermediaries (Khula) | To qualify, an RFI must be legally constituted, have clearly defined SMME target markets, have sound accounting and financial systems, have sound internal organisational guidelines, policies and procedures; have capacity to carry out current and proposed projects; and have clear and achievable short and medium term objectives |
| Competitiveness Fund (DTI) | Available to South African private firms of all sizes. Funds allocated on a first-come, first-serve basis. Firms should submit a realistic plan for the development of its business activities |
| The Bumble Bee Programme (TDI) | |
| Critical Infrastructure Programme (DTI) | |
| DANIDA Business-to-Business | (This is a sub-component of the |

| | |
|---|---|
| Programme (Khula) | Competitiveness Fund which provides free consulting services to micro-manufacturers with less than 20 employees) |
| Duty Credit Certificate Scheme for Exporters of Textile and Clothing (DTI) | Available to local authorities or the private sector or in partnership between the two parties |
| Emerging Entrepreneur Scheme (Khula) | Support will be given to commercially viable businesses for development, based on formation of business partnerships between South Africa and Danish companies. The long term objective is for private partners to continue with the partnership when the support is discontinued. |
| Empowerment Finance (IDC) | To exporters of certain prescribed textile and clothing products |
| Entrepreneurial Mining and Beneficiation Finance (IC) | Accessible to independently owned SMMEs, with assets of less than R2-million before financing. SMMEs must meet the bank's normal lending criteria. |
| Equity Fund (Khula) | Emerging industrialists interested in small to medium-sized ventures who comply with the following criteria: the business must be acquired as a going concern; the business must have economic merit (be profit making and cash generative); the entrepreneur should play a meaningful role in the management of the concern; the minimum size deal is R5-million and the maximum R100-million; and a minimum cash contribution of 10% of the purchase price is required from the entrepreneur |
| Export Finance (IDC) | An economically viable business plan, and minimum financing requirement of R1-million |
| Export Marketing and Investment Assistance Schemes (EMIA) | Accessible to SMMEs with a net asset value of not less than R500,000. Applicants must be able to demonstrate that they are viable in the medium to long term, and that the investors can anticipate an adequate rate of return. |
| Finance for Expansion of a Manufacturing Sector (IDC) | All industrialists/exporters. |
| Finance for Textile, Clothing, Leather and Footwear Industries (IDC) | Available to all exporters, but with special terms for SMMEs. |
| Foreign Investment Grant (DTI) | An economically viable business plan, a meaningful financial contribution of at least 33% by the promoters (10% to 20% for HDPs), and minimum financing requirement of R1-million. |
| Khula Start (Khula) | An economically viable business plan, a meaningful financial contribution of at least 35-50% (depending on the nature of the business) by the promoters (10% to 20% for HDPs), and minimum financing requirement of R500,000. |
| Import Finance (IDC) | Will be available to foreign investors with a foreign shareholding of a minimum of 50%. |
| Industrial Development Zones Programme (DTI) | Accessible to existing NGO/CBO in rural areas involved in SMME activities such as business training and advice. |
| Motor Industry Development Programme (DTI) | All industrialists/importers. |
| Rebate Provisions (DTI/CITA) | |
| Sector Partnership Fund (DTI) | |
| Seed Loans for Retail Finance Intermediaries (Khula) | |
| Skills Support Programme (DTI) | |

| | |
|---|---|
| Small and Medium Enterprise Development Programme (DTI) | Available to all industries (zones have to be designated first).<br>Available to motor vehicle assemblers and component manufacturers and exporters.<br>Available to all manufacturing industries.<br>Available to any partnership of five or more organisations within the South African manufacturing and agro-processing industry that puts forward a qualifying project. |
| Standard Credit Guarantee Scheme (Khula) | To qualify, an RFI must: be legally constituted; have clearly defined SMME target markets; have sound accounting and financial systems; have sound internal organisational guidelines, policies and procedures; have capacity to carry out current and proposed projects; have clear and achievable short and medium term objectives; have matching funds of at least 15% of envisaged operating expenses. |
| Strategic Investment Projects Support Programme for Industrial Innovation (IDC) | Available countrywide to local and foreign firms for training grants under the Skills Support. |
| Techno-Industry Development Finance (IDC) | Available countrywide to local and foreign firms investing not more than R100-million in land, buildings, plant and equipment in new projects or expansion of existing projects. |
| Technology and Human Resources for Industry Programme (DTI/NRF) | Legal entities as well as sole proprietors and partnerships (excluding Trusts) engaged in qualifying manufacturing, high value agricultural projects and agro-processing, aqua culture, bio-technology, tourism information and communication technology investments, recycling, culture industry and business service may apply. |
| Technology Transfer Guarantee Fund (Khula) | Accessible to SMMEs that are independently owned, with assets of less than R2-million before financing. SMMEs must meet the bank's normal lending critiria. |
| Tourism Development Finance (IDC) | (Still pending approval) |
| Wholesale Finance (IDC) | All private sector entrepreneurs in industry submitting a meritorious project proposal. Applicants are accessed on the following criteria: management's ability of product or process development; financial ability to successfully complete the proposed development and commercialisation thereof; and ability to manufacture and market products or implement a process. |
| Work Place Challenge (DTI) | An economically viable business plan, and minimum financing requirement of R1-million. |
| | Research groups in the natural sciences, engineering and technology within educational institutions can participate in collaboration with any private company or consortium of companies. |
| | Available to SMMEs with an approval certificate from CSIR for a technology evaluation on the proposed technology to be transferred before applying to a financial institution for a TTGF guarantee. |

| |
|---|
| An economically viable business plan, and minimum financing requirement of R1-million. Franchises and other applicants must have: a good record of business development; a strong financial position; developed/acquired a training and mentorship programme; require financing for on-lending to at least 10 projects (at least 60% HDPs); and minimum financing requirement of R1-million. Available to South African firms of all sizes. |

*Source: DTI Group Communications, 2001.*

## 7.5 CONCLUSION

There is considerable scope for the involvement of the government in regenerating the Vaal Triangle's economy. However, the government's role is as facilitator so it will be up to the Vaal Triangle's local stakeholders to make use of the opportunities provided by the government. At provincial level, there is an opportunity for the Vaal Triangle stakeholders to formulate and present a project that could be included in the *Blue IQ* Programme. Furthermore, it is clear that there are a number of incentives made available by national government through the Department of Trade and Industry. Once again, the challenge is for local Vaal Triangle stakeholders to invest time and effort in making certain that they make optimal use of such resources.

# 8. LEGISLATIVE ISSUES THAT COULD IMPACT ON REGENERATION IN THE VAAL TRIANGLE

*A study should be conducted to determine the impact of, for example, environmental legislation, labour laws, minimum wages, and IDZ exemptions.*

## INTRODUCTION

There are a considerable number of legislative issues that could impact on the nature of economic regeneration in the Vaal Triangle. Among the most important are environmental legislation, labour laws, minimum wages, and IDZ exemptions. Each of these is discussed in the sections that follow.

## ENVIRONMENTAL LEGISLATION

With regard to environmental considerations, in South Africa there has been very little overall analysis of the environmental sustainability of the economy. However, a need to shift industry onto a more sustainable development path has been identified. This path involves in-depth analysis of the use of natural resources that either serve as inputs to industry or receive its waste. Although environmental law does exist in South Africa, the role of the state in monitoring the environmental impact of industrial activity and administering and managing environmental quality has been ineffective. This is particularly the case in the instance of smaller industries. However, recent changes introduce a new chapter for environmental management in the country, and industry will be forced to reconsider production processes. Only then will environmental law begin to play an important role in influencing industrial strategy (Bethlehem and Goldblatt, 1997). The Department of Trade and Industry catered for Environmental Impact Assessments in their Spatial Development Initiative Programme long before these became law through the new Environmental Management Bill. Despite these developments, there has been general discord on the part of environmentalists because many of the SDIs have been planned on or near some of the most pristine land in the country. Perhaps one of the main causes for concern is that the SDIs "echo the fast-track development strategies of the Asian Tiger economies. There the agenda was to build up wealth and jobs fast, and the thought was that any damage caused could be fixed later with the money generated" (Du Toit, 1998). However, there has been a recommendation that it is important for environmentalists to make sure that their views are heard, and taken into consideration in the development process.

These developments will need to be taken seriously in the Vaal Triangle, particularly considering the existence of heavy industry and thus pollution. It will be important that a balance is found. If, for example, the environmentalists are "too heavy" with the industries and these industries move away, the impact may be more severe in terms of poverty and crime. It should be a process that takes both sides into consideration. Industrial pollution should also not negatively affect the growth of an entertainment/tourism industry, and tourism should not be emphasised at the cost of existing firms (Slabbert, 2001).

## LABOUR LAWS

The Labour Relations Act, introduced in 1996, aims to endorse the basic rights for workers and employers while at the same time responds to the imperatives demanded by world-class manufacturing and the liberalisation of tariffs (Douwes Dekker, 1998). In light of the need to address the apartheid legacy, the appropriate balance between security and flexibility in the labour market to achieve worker welfare and economic efficiency must be reached (Ensor, 1999).

In the Vaal Triangle the general impression is that quite a number of smaller firms and households have reduced their employment quota because of the labour laws. This has also been the case in the agricultural sector (Slabbert, 2001).

## MINIMUM WAGES

An important issue to consider that has possibly had a serious impact on both the private and public sectors is that of minimum wages. Ireland, a country with a trade union density of 55 percent (very high according to international standards), is an excellent example of how this issue has been resolved[4]. The agreement that has been forged between industry and labour on minimum wages in this country involves a social partnership that is an unique development. In fact it enabled Ireland to transform its economy from one plagued by national bankruptcy in 1987 to one of the fastest growing economies in the world within twelve years. The bankruptcy situation resulted in the Irish Congress of Trade Unions, the Employers' Organisation, and the Farmers' Union, approaching the government to discuss other ways of doing business. Through these discussions they negotiated four different programmes that were then implemented, including the:

- Programme for National Recovery (1987 – 1990);
- Programme for Economic Progress (1990 – 1993);
- Programme for Competitiveness and Work (1994 – 1996); and,
- Partnership 2000 (1997 – 2000) – current programme).

Thus these were all voluntarily agreed programmes between government, employers, trade unions, the farming community and, later, voluntary groups who catered for the excluded and disadvantaged. The idea of the whole operation was to develop the concept of a consensual government between all social partners, a totally inclusive form of agreement involving the attitude and reasoning that "all of us are stakeholders in our own society, which we call 'Ireland Incorporated'".

The programmes covered pay and productivity, employment generation, competitiveness, economic and social development and issues of taxation, education, health and welfare. Through these programmes it was planned to provide employment for all, and for those not employed, to provide the highest standard of living possible. For social partnership in Ireland to work, it had to be extended not only to the workplace, but also to local communities and local enterprise partnerships. A National Centre for Partnership was set up to promote the idea of partnership in Ireland.

In the Partnership 2000, there was heavy emphasis on addressing the issues of exclusion in their society. Their goals were to ensure that everybody in their country could be employed; and, in the instance that they were not employed, to ensure that each person could have every opportunity of education, health treatment, housing and sufficient social welfare to ensure a decent standard of living.

Ireland introduced a national minimum wage as from 1 April 2000 that arose from these social agreements. The National Economic and Social Council in Ireland (similar to Nedlac in South Africa) was where all the strategic thinking in regard to the programmes was done, and where major strategies were agreed upon between the social partners for subsequent detailed negotiation in formulating the national programmes.

Irish social partnership in particular terms involved the following key ingredients: consultation, negotiation and bargaining. It was a voluntary agreement without any mandatory element to the agreement. The government was seen as playing a key or unique role, because in Ireland the government is the biggest employer. In the negotiations all the different parties had to learn to make compromises to be able to solve problems. Ireland lost 5.5-million days to industrial disputes from 1977–1987, while the country lost less than a million in the subsequent ten years. Social partnership models in some European countries have been similar to the Irish one, but not as extensive. (Mulvey, 1999)



[4] It is felt that VERB could perhaps play a role in creating and establishing a kind of social partnership in the Vaal Triangle (before industries retrench workers, or unions demand wage increases at the cost of greater employment - and that through negotiation, jobs can be preserved. Minimum wages thus could be tailor-made for the Vaal Triangle where there is a large over-supply of labour and living costs are lower than, for example, in Johannesburg (Slabbert, 2001).

## IDZ EXEMPTIONS

South Africa's ability to provide incentives has some limitations, namely fiscal constraints and World Trade Organisation obligations. For this reason, the IDZ incentives that will be made available involve only marginal adjustments to current national incentives. Proposed new incentives are restricted to – and concentrate on – human resource development support, environmental support measures, as well as discounted local rates and taxes. Because the availability of grants, subsidies and exemptions may be limited in comparison with global offerings, it will be important for South Africa to place emphasis on the regulatory support package and infrastructure in the IDZs (Industrial Development Corporation of South Africa Limited, 1997). The specific support measures to supplement existing incentive schemes and support measures that have been proposed include the following:

8) Dedicated customs office within CSA

- To expedite excise inspection and clearing.
- Duty free import of production-related raw materials and inputs.
- Zero rates on VAT for supplies procured from South Africa.
- Finished goods deemed imports when selling into South Africa.

9) Critical infrastructure programme

- -Require an approved training programme. Certain projects will be funded to the level of between 10% and 30% of the total capital expenditure incurred.
- Projects to be in excess of R100 million.

10) Small and medium enterprise development programme (SMEDP)

- Establishment grant
  - *Eligible projects of up to R100 million will receive an annual cash grant based on the total investment cost. The grant is for two years and in some cases, three years.*
  - *The grant is tax-free.*
  - *Various courses will be offered by the Department of Labour, including learning programmes for skills development construction and operation stages of IDZ's; and various human resource development programmes including skills audits, recruitment selection and training.*
- Skills support programme
  - *Cash grant of up to 50% of training new staff.*
  - *Up to maximum of 30% of the annual wage bill.*
  - *Capital grant for training equipment and course material*

In the Vaal Triangle, the development of an IDZ in conjunction with the licensing of the Vereeniging Airport for handling international cargo, may encourage the location of downstream industries in the Vaal Triangle. This of course may have a multiplier effect. Currently firms in the area send and receive products worth R53,880,000 annually by air (Survey data, 2001).

## CONCLUSION

Each of the factors mentioned in this section are critical issues in terms of how they will impact on the nature of economic regeneration in the Vaal Triangle. They need to be approached and adhered to with caution, and stakeholders will need to work together on formulating action plans that ensure that this happens.

# 9. A NEW INTEGRATED MARKETING INITIATIVE FOR THE VAAL TRIANGLE

*An all-inclusive marketing plan for the Vaal Triangle that can attract new investors is necessary. The combination of the marketing and advertisement budgets of role-players can provide a more forceful initiative. The focal question to be asked: what makes the Vaal Triangle different so that new investors will prefer this region?*

## 9.1 INTRODUCTION

One of the most critical factors hampering development in the Vaal Triangle is considered by a number of local industries to be that the area is not appropriately marketed (Bloch and Dorfling, 2000). It will be important to identify and agree on the area's unique and differentiated brand positioning, promise and marketing objectives. Furthermore, a participative model ensuring broad-based participation and consensus will be necessary to ensure the success of the project. One of the most recent suggestions is to develop an Integrated Marketing Plan for a particular project, such as the proposed 'Emfuleni Renaissance Project'. In this way, there will be a focus on one of the most important advantages offered by the Vaal Triangle (i.e. tourism and recreation), with the success of such an approach expected to have a significant impact on other economic sectors (Visual Volcano Advertising, 2001; and Slabbert, 2001).

In this section, the opinions of a number of local manufacturing stakeholders is covered, as is a proposal by Vaalgro as to how the region should be marketed. Finally, some examples of successful place marketing in South Africa are addressed.

## 9.2 LOCAL INDUSTRIAL STAKEHOLDER OPINION

In a survey by the Vaal Research Group (2001), ten industrial companies indicated that they would be interested in a combined, integrated marketing strategy, whereby the Vaal Triangle is marketed as a whole in terms of its inherent benefits, industries, products manufactured, opportunities, entertainment/tourism attractions, and available incentives (as in the case of East London). These companies are prepared to share the costs of such a publication. The same companies indicated that the Vaal Triangle can best be marketed as an industrial or business location to attract investments due to the following factors: close proximity to Johannesburg and Pretoria; good infrastructure; it is an industrial and educational centre; relatively cheap labour and land; and a beautiful river with excellent facilities. It was considered important to ensure a safe environment as "the rest will follow by advertising". Various types of media were suggested as best to use in terms of advertising the attractiveness of locating in the Vaal Triangle, including television, radio, newspapers, and the Internet. There was also the specific suggestion of advertising the tax breaks that would be available to business in influential magazines, and that advertising should be directed at large businesses.



## 9.3 VAALGRO MARKETING STRATEGY

### Message

In the view of Vaalgro, the main message in marketing the Vaal Triangle should be that the area offers 'the best of both worlds', namely it is close to the chief business mecca, and offers 'good country living'. Further, is should be communicated that the industrial hub offers sustainable investment and business opportunities, is a safe and clean area, and houses friendly people who are service-oriented. The chief issues that need to be addressed are that there should be a "no crime, no grime" environment; a friendly and quality service campaign needs to be developed, as well as a strategy for financial sustainability; there should be involvement of both local government and business; and a strategy for growth and business development and incentives should be formulated (Vaalgro, 2001).

### Marketing strategy

The objective of the marketing strategy should be "to encourage investment and growth in the Vaal Triangle by promoting it as an economically sustainable, socially acceptable and environmentally friendly area". The area will be a preferred investment area if the following economic conditions are evident - economically viable, growth potential, investment and business opportunities, and competitive advantage. The social structure will need to be supported through the relevant infrastructure, relieving poverty through job creation, and the existence of a socially responsible attitude. In order to make the region a "nice place to live or work", it will have to be environmentally acceptable, possess aesthetic appeal, and operate with the parameters of "no crime, no grime". Each of these three main issues (economic, social and environment) need to operate in tandem with the concept of "best of both sides - away from the city - close to the industrial hub".

### Aspects that need to be promoted

There are economic, social and environmental issues that need to be addressed in promoting in a marketing strategy for the Vaal Triangle. With regard to the economic issues, the area needs to be promoted as the "backbone of the steel and chemical industry", as do the perceptions of current performance, the opportunities (such as the IDZ, the airport, downstream manufacturing, and agriculture), and the relevant statistics. Social issues relating to education, housing and facilities need to be covered in promoting the area, with the region being marketed as offering a good quality of life and being service oriented. The environmental issues that should be marketed include the tourism attractions, the fact that the Vaal Triangle is an industrial area but clean, there is "no crime, no grime", there is good country living nearby the cities, and that the area has significant future potential.

### Importance of stakeholder coalition

It is critical that a stakeholder coalition exists in order to succeed in marketing the area. Business, government, and the community need to work together. The community needs to adopt a positive attitude, acting as 'ambassadors' to the region. It needs to help with a crime and grime clean-up, and it has to develop a friendly and helpful disposition. Government is responsible for the provision and maintenance of infrastructure and services, transport, and support (such as incentives, land, infrastructure, and tax concessions). Business and industry needs to market the competitive advantages offered by the area, such as the availability of land, labour and capital, as well as its growth and market potential. The proposed airport and IDZ initiatives, as well as the industrial downstream opportunities, and opportunities for small business all need to be highlighted. The advantages offered by the Vaalgro and Vaalmac structures also need to be marketed by the private sector.

### Approach on how to market the Vaal Triangle

A useful way to market the Vaal Triangle is offered by considering a "360 degree" approach. **Figure 9.1** shows how each of the factors can play a part in successfully marketing the region.

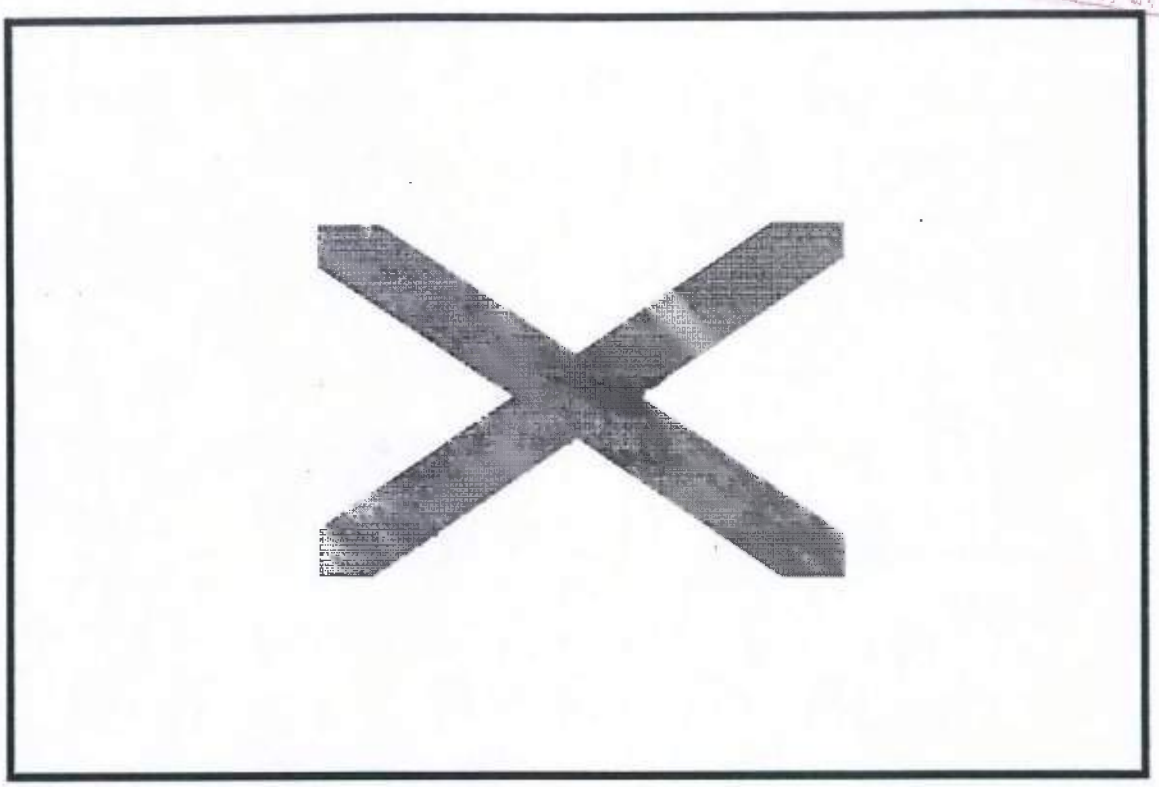


**Figure 9.1A '360 degree' approach on how to market the Vaal Triangle**

*Source: Vaalgro, 2001.*

## 9.4 EXPERIENCE OF PLACE MARKETING: SELECTED CITIES IN SOUTH AFRICA

In this section, the examples of Benoni and the city of East London are discussed in efforts to gauge the experience of place marketing. While Benoni faces similar conditions to those of the Vaal Triangle, particularly in terms of industrial restructuring, the experience of marketing in East London is widely regarded as a 'best practice' case study.

As competition among East Rand towns is intensifying, the Greater Benoni City Council conducted a local economic development (LED) study to address ways of creating employment, and retaining and expanding the industrial base. The LED strategy adopted in Benoni centres around industrial recruitment and place marketing. In other words, the strategy aims to exploit the locational advantages of Benoni to attract new businesses and industries. Benoni has the advantage of being located near to the Johannesburg International Airport and is en route to the Maputo corridor. This makes the area an attractive location for many businesses and industries, and justifies a LED strategy which emphasises place marketing. The Benoni marketing campaign includes an award-winning web site, where potential investors can access information about the city. The city council also aims to attract businesses to Benoni by offering investment incentives, and developing new retail facilities (such as shopping malls). In addition to the place marketing and industrial recruitment strategy, the City Council has initiated various other LED projects. Some of these projects are aimed at supporting small enterprises, whilst other projects aim to promote exports by encouraging the sale of locally manufactured products, and developing hotels and guesthouses where foreign visitors can be accommodated. The City Council is also involved in developing the skills of local residents through skills training. The Greater Benoni City Council has made significant progress in establishing a viable LED programme. The challenge they face is developing systems that will enable them to accurately measure the results of their LED programme.

One of the examples that is considered a success in terms of marketing is the city of East London in the Eastern Cape Province. The East London City Council markets the Border-Kei Region as South Africa's region for "New Century Business Opportunities". A high quality, attractive prospectus of the region is published annually. The prospectus covers the following aspects: geographic position and features; history and population; economic overview; provincial growth and development strategy.

Some of the main challenges set out include: sustainable economic growth; job creation, growth of integrated industry, manufacturing and commerce, with export led, value added products; infrastructure and rural development; social partnerships; human resource development; optimal use of natural resources; provision of basic needs; and intergovernmental cooperation. Investors' confidence is described in the prospectus, with investors apparently very confident in East London as has been evident by the multibillion-rand motor industry. Investors' confidence is said to be growing, with further significant investments expected. The city of East London is determined to establish itself as one of the top destinations for guaranteed return on investment. The investment advantages are described from a South African and regional viewpoint. The advantages specific to East London are described as follows:

- proactive local government;
- streamlined duty-free industrial environment;
- spatial development initiatives;
- firm base of established industrial activity and existing support services;
- extensive water supply;
- diversity in natural assets;
- abundant labour at competitive rates;
- low level of industrial unrest or discord;
- easy access to a purpose-built port as well as an existing airport;
- exceptional educational institutions;
- large, conveniently positioned commercial centres and amenities;
- safe environment;
- wide choice of business and holiday accommodation;
- excellent quality of life; and
- outstanding sporting and recreational facilities and opportunities.

The spatial development initiatives for the region are also described, as are the business opportunities, the investment incentives. A description is given of the Centre that was created to assist prospective investors. The government, to co-ordinate and link the interests of the province to the investment promotion framework, created the Centre for Investment and Marketing in the Eastern Cape (CIMEC). CIMEC is an autonomous organisation designed to represent all stakeholders within the Eastern Cape. It provides services and financing assistance to prospective investors. The physical infrastructure of the region is also described, emphasising that the support infrastructure of the Border-Kei region – and East London in particular – is of high quality, dependable and relatively inexpensive. A description is given of the outstanding features of transport and construction, like the quality of roads, air transportation, road repairs, property market and housing. The system of water supply is explained, and a description of the electricity capacity is given. It is mentioned that South Africa's telecommunications network is well developed and modern. The attributes of the human workforce, and the local educational institutions are spelt out, and it is mentioned that the Border-Kei region is recognised as having a wealth of natural and human resources that can be utilized by small enterprises for the purposes of industry, agriculture and tourism. A description of the various economic sectors, including manufacturing, agriculture, tourism, and wholesale and retail trade, is also laid out. Much effort is expended on manufacturing and the related specific industry incentives, and the industrial development zone initiative and its advantages is described and advertised. With regard to the business environment, a description is given of the vision that local government and organised business and labour have in order to create a attractive business environment. Local government in the Border-Kei region, together with organised business and labour, is united in creating and strengthening an environment in which business is able to grow and prosper. The focus on international trade is aimed at developing the city of East London into a major export driven manufacturing centre through the strength of its strategically situated port. A description is also given of what is done to facilitate business development. (East London Focuss, 2001).

## 9.5 CONCLUSION

There is a great deal of recognition amongst local stakeholders that a well planned and formal marketing initiative is required in order to successfully market the Vaal Triangle. Some of the large industrial players have given strong indications that they are prepared to work together on marketing the area as a whole, particularly in terms of attracting investment. The Vaalgro marketing plan offers further insight as to what aspects of the region should be marketed, and how this could best be approached, while the experience of the cities of Benoni and East London offer further insight as to how to be successful in place marketing.

# 10. PROPOSED STRUCTURE FOR VERB

## 10.1 INTRODUCTION

Over the past few years, Potchefstroom University has attempted to form a type of leadership structure in the Vaal Triangle. Industry was interested in becoming involved, but there appeared to be a lack on interest on the part of the municipalities. Since the 2000 elections the situation has changed, with the new mayors and their mayoral committees showing serious interest in working together with local business and industry. With more and more realisation that the stakeholders will need to work together to succeed in regenerating the economy, the establishment of the institutional vehicle of the Vaal Economic Regeneration Board (VERB) has been recommended. The role of the VERB is to act as an authority to stimulate economic development in the region. It will also act as a "voice" for the Vaal Triangle, and operate in a co-ordinated fashion so that efforts are not duplicated. Activities may therefore be to "initiate" or "approve" or "recommend" or "coordinate" projects. It should be noted that the VERB will operate across provincial boundaries (i.e. the Free State and Gauteng).

In this chapter, both the function of this proposed institution, as well as the structure, is discussed.

## 10.2 FUNCTION

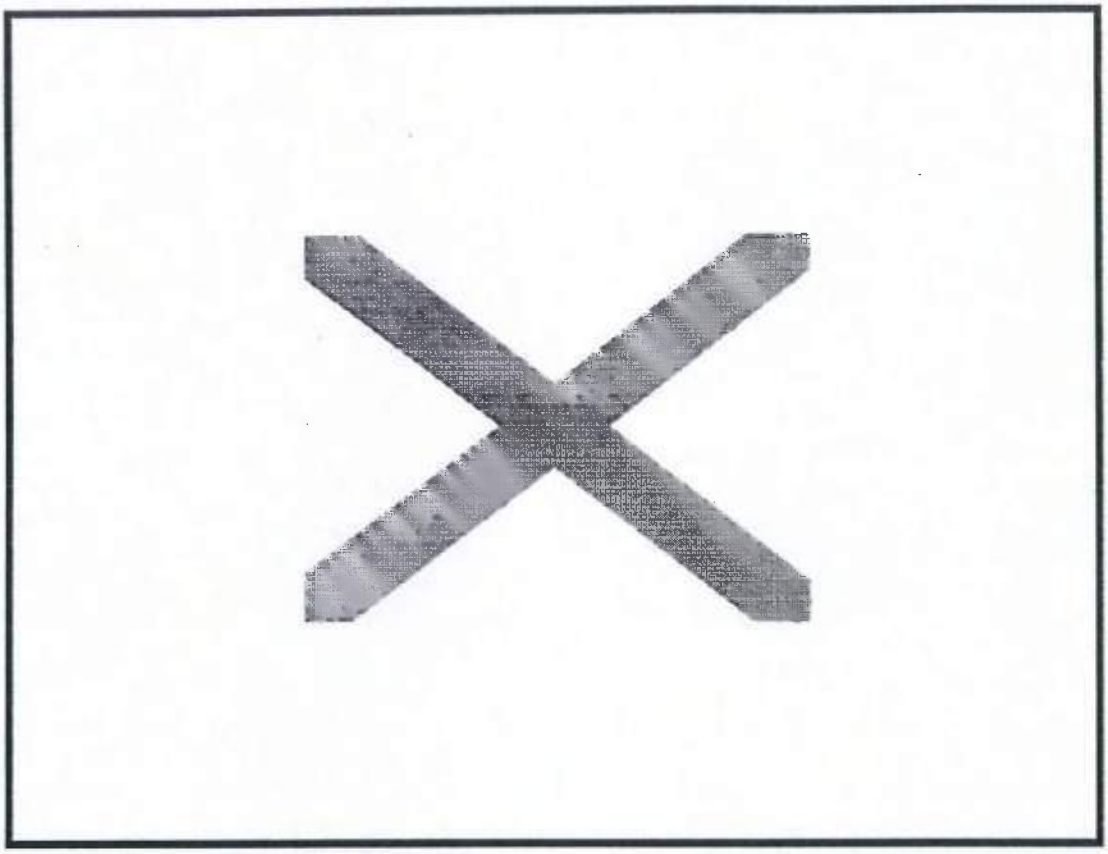
The purposes or functions of the VERB are planned to include the following:

- it should form one 'mouthpiece' for the regeneration of the Vaal Triangle's economy;
- it should serve as a clearing house for regional economic regeneration initiatives;
- it should co-ordinate regeneration initiatives;
- it should communicate initiatives to investors and governmental bodies;
- it should co-ordinate the establishment of new enterprises and seek, for example, funding for projects; and
- it should establish step by step the involvement and commitment of all role-players in the regeneration process.

## 10.3 STRUCTURE

It has been suggested that this structure be co-ordinated and administered through the existing Vaalgro structure, as can be seen from **Figure 10.1**. As can be seen, there are certain individuals offering expertise with regard to economic regeneration issues for this public benefit organisation (PBO) called the Vaal Economic Regeneration Board (VERB). Further, the involvement of the four mayors in the Vaal Triangle is evident, as is the involvement of seven managing directors of major local industries. The figure also shows that there are links to a number of different kinds of institutions and stakeholder groups in the region.

Figure 10.1 Proposed structure for VERB



*Source: Vaalgro, 2001.*

## 10.4 CONCLUSION

In the absence of a strong regional decision-making body, the establishment of the Vaal Economic Regeneration Board (VERB) is a giant leap forward in the direction of promoting and initiating economic regeneration in the region in a co-ordinated and concrete manner. The involvement of a broad range of institutions and interest groups from the region is encouraging, and critical, particularly if these efforts are to bear fruit in the short to medium term.

## 11. CONCLUSION

There are a number of factors influencing the urgency with which economic regeneration in the Vaal Triangle needs to be tackled. Almost half of the labour force is currently unemployed, and over forty-two percent of all households in the area live below the poverty line. Although the area contributes only 7.8 percent to the total GGP of Gauteng, it has traditionally played a significant role in the Gauteng economy, particularly in terms of the role of the steel and chemical industries. The manufacturing sector, contributing almost 20 percent to provincial manufacturing GGP, remains the obvious key economic sector within the Vaal Triangle economy, both in terms of employment and contribution to GGP. Within the last decade (1990-2000), the contribution of this sector to local GGP has declined from 50 percent to 43 percent. This has had a serious impact on the economy as a whole, particularly as the sector plays such a dominant role, having strong linkages with other economic sectors.

In response to the economic decline that has been experienced, a number of economic regeneration initiatives have come to the fore. These initiatives are at various stages of implementation, and their success is largely dependent on the various factors hampering new investment in the Vaal Triangle. For this reason it is critical to take each of these factors seriously and deal with them accordingly, while at the same time considering what the area realistically has to offer new investors. In doing so, it will be easier to identify what kinds of businesses are ideally suited to the Vaal Triangle economy. These businesses can then be targeted by an integrated marketing initiative for the area that highlights the various incentives on offer by national government, while at the same time focuses in on a specific 'brand' or concept for the Vaal Triangle in particular. The challenge will be for a strong decision-making body to champion and co-ordinate economic regeneration efforts in the area, possibly through a structure such as the proposed Vaal Economic Regeneration Board (VERB).

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# Appendix E: Risk Communication as a Tool in Public Participation

## 1. Foreword

The purpose of this document is to provide a point of departure on which to base an understanding of, and the importance of the concepts associated with Risk Communication in regard to the Master Plan exercise for the IVS Vanderbijlpark (formerly Iscor Flat-products IFSP) Works.

## 2. Introduction

### 2.1 Perception v Fact

One wonders in some instances why a well-planned, and perfectly implemented project goes awry, resulting in a tremendous backlash from the Public and/or pressure groups: even when the project is designed to improve the environmental situation. An example could be mitigating the negative effects of a project (existing or planned) on the environment. In some instances, the impact has either been insignificant or effectively mitigated; while in others, the negative impacts have "been blown out of all proportion". This discrepancy between scientifically based studies in contrast to the perceptions held by the Public has much to do with Risk Communication.

It is generally difficult for organisations to attain the magnitude of the paradigm shift needed to adopt and implement the approach of Risk Communication. This may be due to the following facts and /or perceptions:

- "It doesn't / can't work" (democratic philosophy threatening the ego, self-esteem);
- "It's not the way we do things around here"!;
- A lack of knowledge and/or understanding;
- A lack of confidence / trust in the process and/or individual parties/persons.

It is acknowledged that this is a challenging way of trying to sort out a horrible situation (humiliating and demoralising, a threat to mental and/or physical well-being, emotionally exhausting). The change in approach should be implemented as soon as possible, with the benefits becoming apparent rather sooner than later. Both the Proponent (IVS) and the Stakeholders (Authorities and IAP's) could even be intellectually impressed, but are in fact still emotionally frustrated and reluctant to make further, risky changes.

## 2.2 General findings from the GAP Analysis

The Stakeholders were regarded to include everyone and every party involved – Authorities, Interested and Affected parties, potential IAP's.

- Much Public Participation and Public Relations has been done (and there is a difference in approach) generally on specific issues – often which was as a result of problems. The exercises were segmented, localised, usually negative, and often involved "fire-fighting".
- Within individual projects, the public participation process was followed by the book (with regards to consultation). This usually included existing structures. In certain cases there has been cases of gate-keeping – exclusion of people on the ground, and a focus on certain communities – again, relating to fire-fighting.
- The processes didn't always identify and address the real issues e.g. organic pollution – buyout with inorganic, chronic contamination.
- The interdict action has frustrated all parties trying to solve the real problems.

# 3. Definition of Risk Communication

Risk communication deals with the potential for – and management of risk resulting from the communication of facts and perspectives between parties with differing backgrounds and/or agendas. There are two broad, but divergent objectives, namely mobilisation & attenuation.

## 3.1 Mobilisation

Mobilization has the objective of alerting an apathetic person or community into action, for example:

- Evacuation from an area with an imminent disaster such as a flood, volcano or an uncontrolled spill of a hazardous substance, or
- An action that is not popular - such as practicing safe sex or using a condom.

## 3.2 Attenuation

In contrast, **attenuation of outrage** is designed to calm people down and reassure them of a situation exacerbated by perception(s) verses – and often in contrast to - scientifically based facts. This may also be designed to assist them to make a decision based on a better understanding of the situation. What is referred to here, is the level of outrage experienced by an individual or a community, and the **risk** of the outrage bearing negative consequences on the responsible person or party trying to carry out a certain action to normalise the situation.

## 3.3 Broad Implications

The problem: Risk is a function of hazard and outrage.

Risks causing the harm (damage or fear) are not usually what upsets people.

There is a very low correlation (0,2 or 4% of the variance) between actual harm and public concern.

Principles: A new focus / solution to defining the answer is needed.

Experts and Authorities become concerned when hazard is high and outrage is low – the Public are generally apathetic.

Public and pressure groups are concerned when outrage is high, even if hazard is low - experts less concerned.

## 4. Relationship with Risk Assessments

Risk Communication should not be confused with a Risk Assessment, which is a separate exercise. Risk communication may be **one of** the measures used to pro-actively or reactively mitigate the risks identified during the risk assessment exercise.

## 5. Relationship of Risk Communication to Public Participation

Risk Communication is one of many tools available to assist the process of Public Participation; others include:

- Alternate Dispute Resolution;
- Dialogic or deliberative sessions to identify the issues that really need to be addressed and how to address them, and to find and develop areas of mutual interest.

## 6. The Management of Risk Communication



### 6.1 Causal Factors

The reason why there is a risk in communicating with public is traditionally believed to be the result of technocrats not playing open cards with the interested and affected Stakeholders because possibly they did not understand, or they could not understand or they weren't allowed to. The Stakeholders generally became outraged for the simple fact that they were not procedurally included in the exercise or situation and not given the opportunity to have a say in the matter.

However, generally the public do understand risk very well - for example, gambling or not practising safe sex, and the technocrats can explain the issue very well to a non-technical audience.

The real reason is the difference in the **definition of risk** from a technical (scientific or engineering) point of view, verses the understanding and use of the concept of risk

by the non-scientific Public. To the technical person, risk has a very specific meaning with certain defined implications.

Risk Communication recognises and addresses the difference in the understanding of risk between scientists and non-scientists who understand risk as a function of hazard and outrage. Scientists and engineers have a very specific definition of risk, focussing on the hazard and probability of a situation, whereas the Stakeholders, focus on a host of factors which result in their outrage at the situation. These factors are often based on perceptions, (in contrast to scientifically based facts), and the factors may include:

- Autocratic attitude towards the Stakeholders "IAP's" by the consultants and Authorities;
- Unknown/unfamiliar circumstances that the Public find themselves in– exacerbated by the use of scientific jargon at public meetings;
- Lack of control by the Public over the situation in which they find themselves, for example:
  - polluted groundwater
  - devaluation of property;
- Lack of fairness; and
- Lack of trust.

Whether or not the situation is factual or a perception, makes no difference to the outcome of outrage.

Where these factors have a high level of certainty the result is a high risk situation even if the situation is not especially hazardous.

Risk Communication recognises and addresses the difference in the understanding of risk between scientists and non-scientists who understand risk as a function of hazard and outrage. Scientists and engineers have a very specific definition of risk, focussing on the hazard and probability of a situation, whereas the stakeholders, focus on a host of factors which result in their outrage at the situation. These factors are often based on perceptions, (in contrast to scientifically based facts), and the factors may include:

- Autocratic attitude towards the stakeholders "IAP's" – consultants, authorities
- Unknown/unfamiliar circumstances – scientific jargon
- Lack of control over the situation
  - polluted groundwater
  - devaluation f property
- Lack of fairness
- Lack of trust



Where these factors have a high level of certainty the result is a high risk situation even if the situation is not especially hazardous.

We will be looking at applying a combination of six broad strategies to mitigate the stakeholder outrage, and, very briefly these include

- stake out the middle, not the extreme
- acknowledge prior misbehaviour
- acknowledge current problems
- give others credit for achievements
- share control – or be accountable
- bring unacknowledged concerns to the surface

Principles: **definition**

The problem: Risk = f (hazard; outrage).

Risks causing harm are not usually what upsets people.

There is a very low correlation (0,2 or 4% of the variance) between actual harm and public concern.

Principles: New focus / solution to defining the answer

Experts and Authorities concerned when hazard is high and outrage is low - Public apathetic.

Public and pressure groups are concerned when outrage is high, even if hazard is low - experts less concerned.

## 6.2 Risk and Hazard

Risk in scientific terms may be defined (simply) by the **magnitude times the frequency of the occurrence.** Data is used by inference from laboratory experiments using relatively large concentrations of a single substance to be tested on the individual of one species, for example a rodent. The implication is drawn from the outcome of the experiment to minute concentrations of the same substance (sometimes mixed in as a cocktail of substances) on a community or population of humans. This approach generally stems from a chronic problem in the field of toxicology, whereas a fault-tree analysis may be used to assist in identifying and describing an acute or catastrophic risk.

## 6.3 Risk and Outrage

On the other hand, the general public regard risk as a function of **hazard and outrage**.
Hazard refers to the perception of an impending negative situation resulting in such concerns as:

- "How do I think this situation will affect me (negatively)?", or
- "What danger do I think I will be in?", or

- Perhaps more cynically and although in a different category, still has the potential to result in a risk: "what do I think I can get out of the situation?"

Outrage covers the reactive side of the function, including:

- "How will I respond"?, and this in turn may well be based on such subjective perceptions as:
  - "Have I been treated fairly"?
  - "Have I been adequately consulted with in the decision-making process"?

## 6.4 Risk of Ineffective Communication

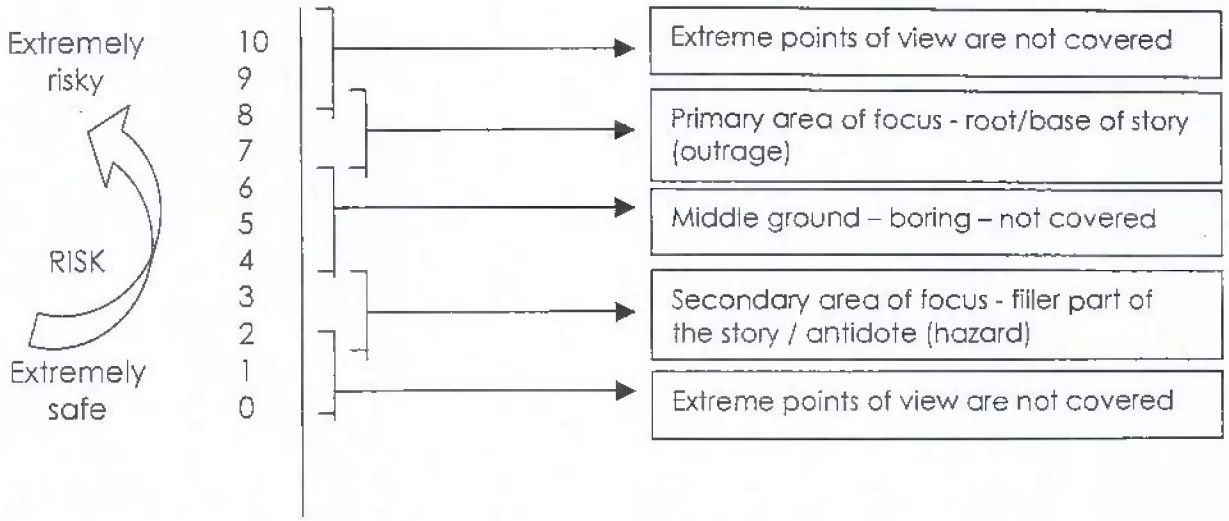
The **risk** as a consequence to ineffective communication is caused by the following mechanism:

- "Technocrats" tend to focus on the hazard side of the function, and effectively ignore the outrage, resulting in a high level of risk, irrespective of the actual level of hazard, whereas
- The general public focus on their outrage, ignoring the scientific determination of the predicted and/or measured (actual) levels of hazard; in other words, they assume that the hazard is high.
- The more the Technocrats try to justify and motivate the real level of danger, the less the general public want to believe them.
- If a situation causes a reaction, which in turn causes high outrage, the level of reaction by the public is not necessarily (and usually not) related proportionally to the danger level of the effect – either positively or negatively.

# 7. Media Communications

## 7.1 Principles (from the point of view of Risk Communication):

- Where outrage exists, it is only harvested by the media (the media does not (itself) cause outrage).
- The media focuses on outrage (in contrast to) hazard.
- When covering hazard, the media covers **opinion** not data.
- The generic structure of media reports:




- Scale "7" and "3" stories are obtained by a scavenge/hunt strategy, consisting of:

  - Begin by going to the Regulating Authorities for a comment to determine their perception of whether the situation is safe or hazardous,
  - Then you go to activists to obtain a comment that the situation / material "may be hazardous", and **only then**
  - Do you go to industry, which will probably report it is "effectively safe".

  A controversy has started germinating, which can be used (abused) according to the agenda on the table. The loop could also be stared again.

- Journalists very seldom have opinions – if so, they write editorials, but usually they quote opinions.

- The **rational** behind scientifically – based information is generally **ignored**, and zones 7 and 3 are covered to generate a story.

- The purpose of the journalist is to feed the browsers (see below, paragraph 7.4).

- **Strategy**: try to ensure that the hazard-generating situation receives less coverage when compared to the hazard-mitigation situation.

- The public will still read a balanced (with respect to hazard) story negatively (remember there is a low (0,2) correlation between hazard and outrage), including reassuring information.

- A classic (and fatal) response is "don't worry, we have everything under control".

- With an outrage-related story, **apologies** get a very good coverage.

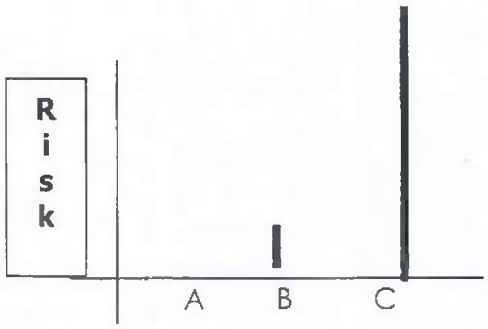
**A typical statement could be:** "We have been forced by the changing international price of steel products to cut capital and operational costs where possible, and we would like to discuss the implications with you in a media release".

## 7.2 Strategies for Media, Activists / Pressure Groups

| Various Possible Strategies | Outcome in Practice | Reason | Remedy |
|---|---|---|---|
| 1. Beat them | Doesn't work | They prefer to lose and remain polarised (their strength) | Patient assertive dialogue, build respect and trust |
| 2. Convince them | Doesn't work | They have their legal and technical experts – a loop develops | Focus on the truth – ignore everything else (which are lies and not sustainable). |
| 3. Focus on "Attentives", and convince them that the Activists are right and they have been heard | Can work | They know and understand what's going on. | Merge their suggestions, issues and concerns (Obtain ownership). |
| 4. Get the Activists to exclude themselves from the process and consequently become marginalized. | Can possibly work | Only sustainable if they exclude themselves | Remove the potential benefit(s) of activism – i.e. the outrage. |
| 5. Lure the Activists into collaboration. | Can work | Their public statements will be victorious and slanderous and not related to the "behind the scenes" talks (they have to satisfy their own constituencies). | Be prepared to sacrifice confidentiality and pride. |
| 6. Get them to abandon the issue and find someone else to attack. | Can work. | The "milk cow" runs dry (it is not sustainable). | Atonement; share control (working groups / liaison committee). |
| 7. Get the Activists to win – to beat you | OK if within our goal framework | If the critics no longer have a problem, the regulators will have less concern | |

### 7.2.1 Strategy I: Moderation

Become and stay a moderate.




- ❑ with a pending controversy:

  B we do tell; they find out
  A we don't tell; they don't find out
  C we don't tell; they do find out

- ❑ don't exaggerate / "positive misimpression"
  - "zero" risk with "extra low" what is the public's perception
  - a mislead public is like a ripe plum for activists.

- ❑ Maintain neutrality (objectively).

- ❑ Remain honourable – use the truth and ignore all else.

  Let's say IVS does a B-minus rated job, and the pressure groups give IVS an F, and IVS give themselves an A; it won't or doesn't help. Fight the Activists "F" with the Clients B-minus.

- ❑ Communications: list every thing that can honourably and truthfully be said against you – communicate together with issues in your favour. Ignore the remainder which is lies and is not sustainable; it becomes an intellectual debate by the pressure groups to retain controversy.

- ❑ Public Relations versus stakeholder relations : both are needed, but **differ** as follows:

| | Public Relations | Stakeholder relations |
|---|---|---|
| **Audience** | Marketing/advertising (hard/soft sell)<br>Apathetic but credulous | Risk communication & dialogue<br>Attentive but hostile and disbelieving |
| **Audience** | Accept what you throw at them after you've grabbed their attention | Sugar-coatings: outrage |
| **Objective** | Sale | Relationship |
| **Target** | Media (press)<br>(public are the props) | Public (use the media as a prop) |

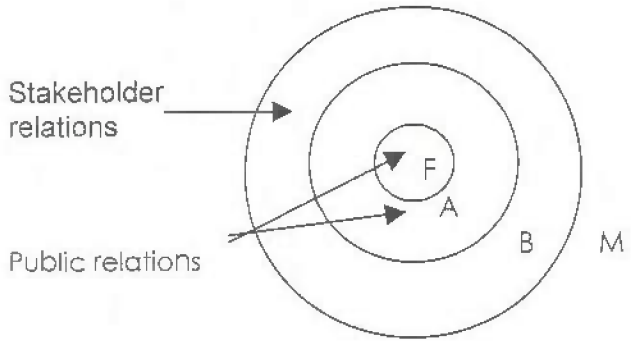
### 7.2.2 General

- ❑ Sharing control is inversely related to outrage and esteem (and doesn't need to compromise power); control – affects implementation (eg. back-seat drivers), whereas, power retains the decision-making status (eg. drive the bus).

- ❑ The Steering committee should include representatives from the RILC (Representative IAP Liaison Committee) together with DWAF and Gauteng-DACE.
- ❑ Agree to the Terms of Reference for complementary studies, and foe example which laboratory will be used.
- ❑ Agree to boundaries before the outcome. (if a then b; if c then d) (objectivity)

i.e. zero trust requires maximum accountability with detailed contracts (no trust) being drawn up (this is intrinsically reciprocal).

### 7.3 The target audience




F = Fanatics
A = Attentives
B = Browsers
M = Masses

## 8. Public Participation Structures

**Steering committee**

Iscor mgt
Master Plan Team
DWAF
G-DACE

**Decision-making**: formal, legitimate, stable, procedural

**Liaison committee**

**Advisory**: consultative, networking

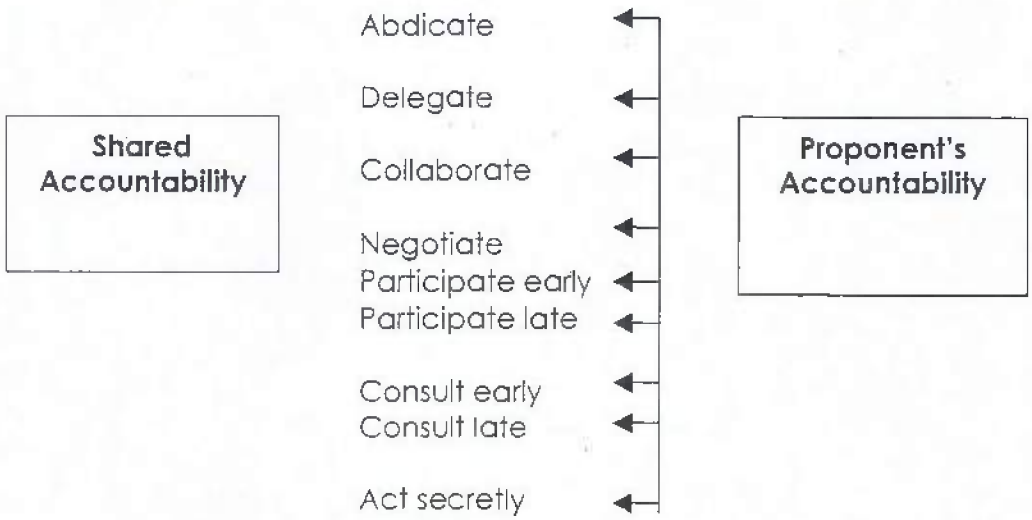
(remain open, keep redoing work – new member up to speed, venting facility).

**KSE / FMA**
**Iscor:**
Environ. Mgt
Corp. Com.s
**Stakeholders**
**Press**

plus *ad hoc* Meetings
1on 1 meetings

# 9. Ladder of Responsibility and Participation

## 9.1 Ladder




## 9.2 Rules

- Stay as low as you can (on the ladder above);
- If you don't know, climb one rung higher;
- Rules for climbing:
  - you need their input,
  - they want to give you their input,
  - you need insurance (credibility).

# 10. Mitigation

There are several methods to mitigate a situation, which can result in a risk to a person or party through poor communication. These will be applied to the various situations underway and those expected at the Works.

A combination of six broad-based strategies will be applied to mitigate the stakeholder outrage, and, very briefly these include:

- stake out the middle, not the extreme
- acknowledge prior misbehaviour
- acknowledge current problems
- give others credit for achievements
- share control – or be accountable
- bring unacknowledged concerns to the surface



***Acknowledgement - Note:*** ***The theory of Risk Communication has been based on a specialist course presented by Dr. Peter Sandman at the IPA2 conference, Washington, May 2000.***