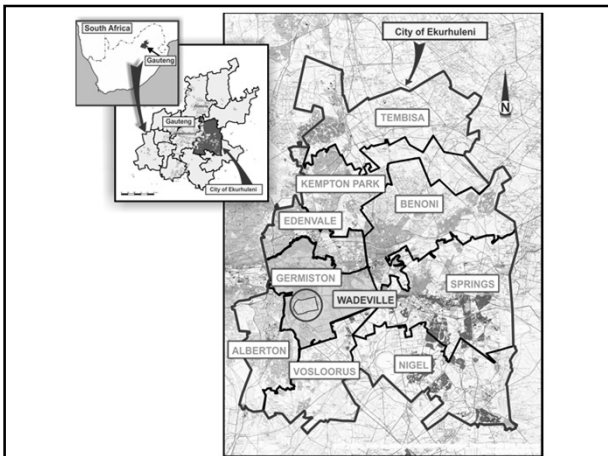


Wadeville Consumer Meter Consolidation Project – Case Study

Presented by: T. Godzwana

Primary Project Objectives

- Upgrade aging water meter infrastructure
- Consolidate supplies to consumers
- Address metering and billing errors
- Reduce Commercial losses
- Reduce Physical losses



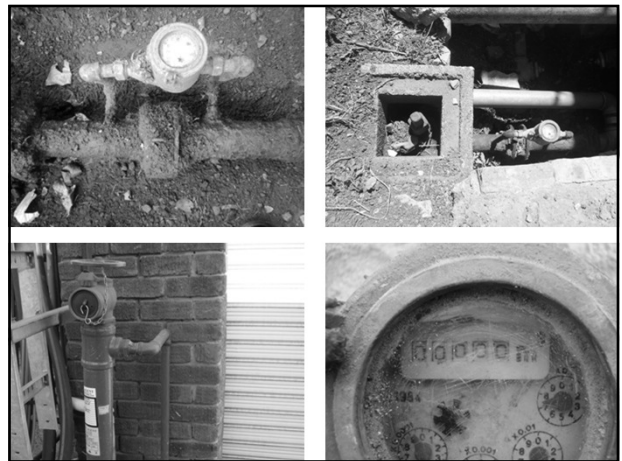
Project Role Players

- **Client:** Ekurhuleni Metropolitan Municipality- Water & Sanitation
Department: Water Revenue Management
- **Meter Management Consultant:** Tsekema
- **Implementing Consultant:** WRP Consulting
- **Contractor:** Galaxy Pipelines

Background

- Wadeville industrial area consists of more than 500 non-domestic consumers
- Water infrastructure and connections were constructed many years ago and are in poor condition
- Many below ground meters are buried and are not read
- Many fire supply connections are not metered
- Some fire reticulation has leakage which is unknown

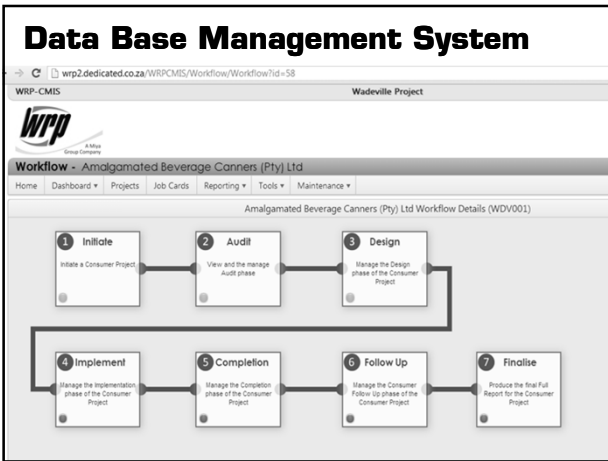




Project Methodology

- Identify all supplies to each consumer
- Conduct zero pressure test to confirm all supplies have been located
- Design and size consolidation of supplies
- Consolidate consumer supply meters to a single meter per consumer
- Update municipal billing system
- Prepare final report





WRP-CMS Wadeville Project

Reports - Project Progress Report

WRPRef	Consumer Name	Stands	WRP Engineer	Instruction Generated	Field Investigation	Shutdown	Design Submitted	Design Approved	Job Card Issued	Construction Completed	Complete Report
VID005	Dentl Office Furniture	98	Mhoko Mchaha	29/11/2012	14/02/2013	18/02/2013	22/02/2013				
VID006	M & J Engineering (Pty) Ltd	99	Mhoko Mchaha	25/10/2012	15/02/2013	27/08/2012	25/10/2012	29/10/2012	11/02/2013	15/02/2013	02/07/2013
VID007	General Erecton Co	100, 101 and 102	Mhoko Mchaha	29/11/2012	25/02/2013	18/03/2013	25/04/2013				
VID040	Muro Steel Products (Pty) Ltd	103,104	Mhoko Mchaha	09/11/2012	18/02/2013	31/08/2012	25/10/2012	30/10/2012	11/02/2013	15/02/2013	25/04/2013
VID041	Reunert Mechanical Systems Ltd	32,34,33	Tshilo Godzwana	09/11/2012	15/08/2012	07/08/2012	25/10/2012	12/11/2012	12/02/2013	12/08/2013	
VID043	Sindera RM	200	Tshilo Godzwana	12/11/2012	07/03/2013	07/08/2012	02/10/2012	29/10/2012	12/02/2013	07/03/2013	28/03/2013
VID044	Proof Engineering (Pty) Ltd	549-R	Tshilo Godzwana	22/11/2012	26/04/2013	07/08/2012	26/11/2012	12/02/2013	19/02/2013	29/04/2013	17/05/2013
VID045	Oranel Network (Pty) Ltd	549-1	Tshilo Godzwana	09/11/2012	06/03/2013	24/08/2012	24/10/2012	29/10/2012	12/02/2013	06/03/2013	12/04/2013
VID046	A P E Prop (Pty) Ltd	26	Tshilo Godzwana	21/02/2013	06/08/2012	08/10/2012	25/09/2012	19/10/2012	No Const. Req.	No Const. Req.	No Const. Req.
VID047	Johnordreyse South Africa (Pty)	713	Tshilo Godzwana	14/11/2012	06/03/2013	31/05/2013					
VID048	Reflex Pipebaskets & Spraysaintes	54-1	Tshilo Godzwana	09/11/2012	15/02/2013	07/08/2012	19/11/2012	28/11/2012	12/02/2013	25/02/2013	13/03/2013
VID049	Thang Prop.co	54,8,54,2	Tshilo Godzwana	13/11/2012	02/10/2012	24/08/2012	25/09/2012	19/10/2012	12/02/2013		
VID050	IT Development (Pty) Ltd	818	Tshilo Godzwana	09/11/2012	09/03/2013	14/08/2012	19/11/2012	12/02/2013	12/02/2013	12/02/2013	12/02/2013



Meter consolidation Example 1: Amalgamated Beverages canners

FollowUp - Amalgamated Beverage Canners (Pty) Ltd

Home Dashboard Projects Job Cards Reporting Tools Maintenance

FollowUp - Amalgamated Beverage Canners (Pty) Ltd (WDV379)

Save Return

Date Initiated: 2013/08/16 Date Completed: Task Completed:

Follow Up Report Exiting Meters New Meters Courtesy Visit Meter Reading History ADD Attachments

No	Serial No	Factor	Pre-Implementation Reading		Start/Final Meter Reading		Post Meter Reading		
			Reading	Date	Reading	Date	AADD Prior m ³	Reading	Date
1	112233	1	42	2012/07/17	52	2013/04/06	0.04	0	
2	YZT122	1	83283	2012/07/17	85432	2013/04/06	8.17	0	
3	CM1445	1	44437	2012/10/22	44437	2013/04/06	0	0	
1	120051023	1			6	2013/04/06		1619	2013/08/16 12.22
1a	120051936	1			0	2013/04/06		3162	2013/08/16 23.95
Total							8.21		36.17
Consumption Change			27.97 Per Day		838.95 Per Month		R 0.00 Rand/Month		



Meter consolidation Example 2: Energy oil

FollowUp - Energy Oil (Pty) Ltd

Home Dashboard Projects Job Cards Reporting Tools Maintenance

FollowUp - Energy Oil (Pty) Ltd (WDV064)

Save Return

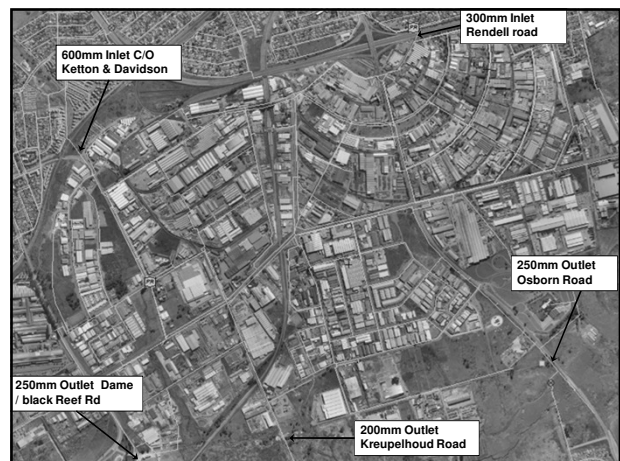
Date Initiated: 2013/08/16 Date Completed: Task Completed:

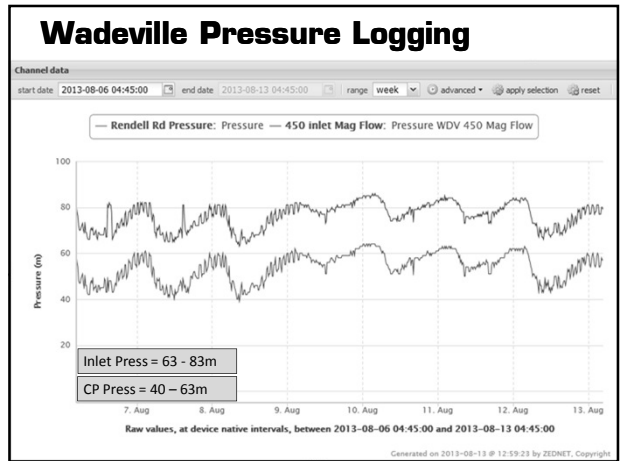
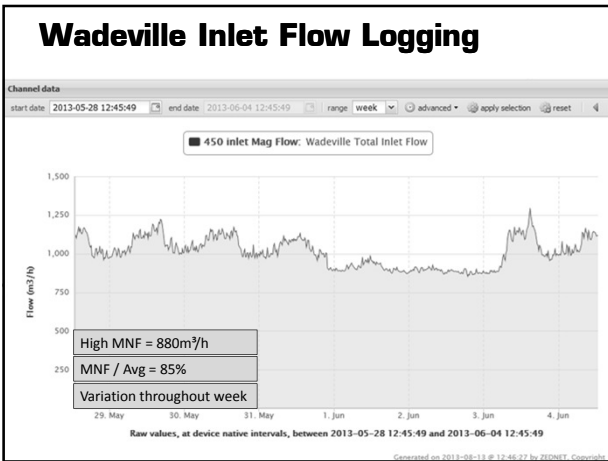
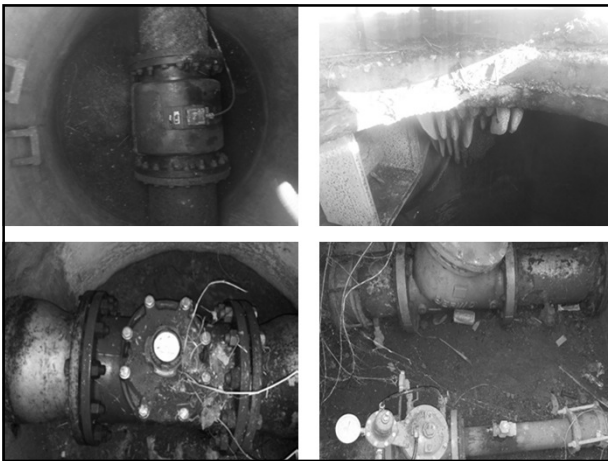
Follow Up Report Exiting Meters New Meters Courtesy Visit Meter Reading History ADD Attachments

No	Serial No	Factor	Pre-Implementation Reading		Start/Final Meter Reading		Post Meter Reading		
			Reading	Date	Reading	Date	AADD Prior m ³	Reading	Date
1	080055526	1	69657	2012/07/17	80839	2013/05/04	38.43	0	
1a	68340659	1	6981	2012/07/17	6981	2013/05/04	0	0	
2	Un-metered	1	0	2013/02/11	0		0	0	
1	110126765	1			7	2013/05/04		3839	2013/08/02 42.58
1a	110127639	1			1	2013/05/04		1187	2013/08/02 13.18
Total							38.43		55.76
Consumption Change			17.33 Per Day		519.88 Per Month		R 0.00 Rand/Month		

Challenges Encountered

- Isolating sections of network pipes
- Aging condition of municipal infrastructure
- Negative sentiment of some consumers towards council
- Shutting water to consumers





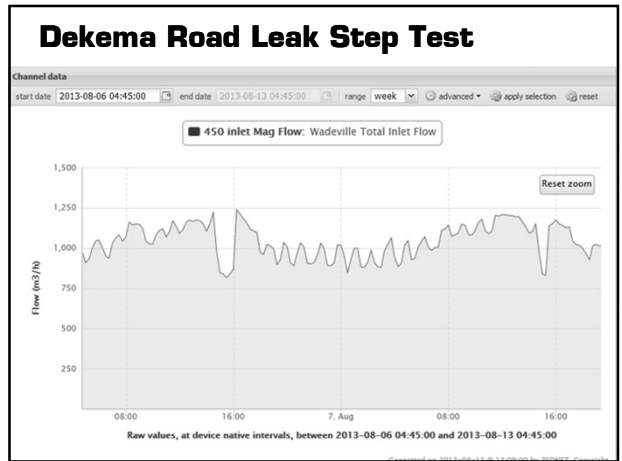
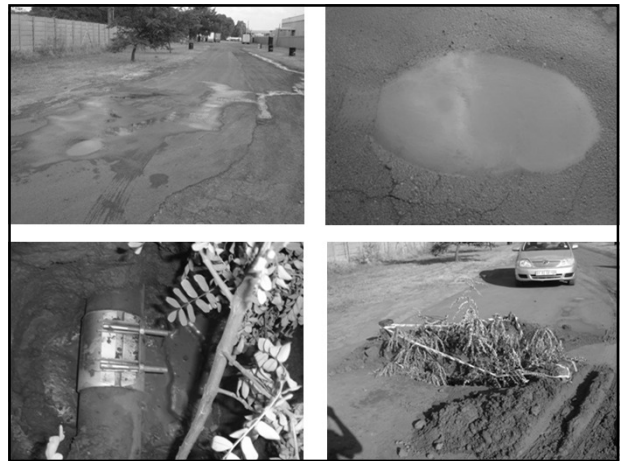
Leaks spotted on site

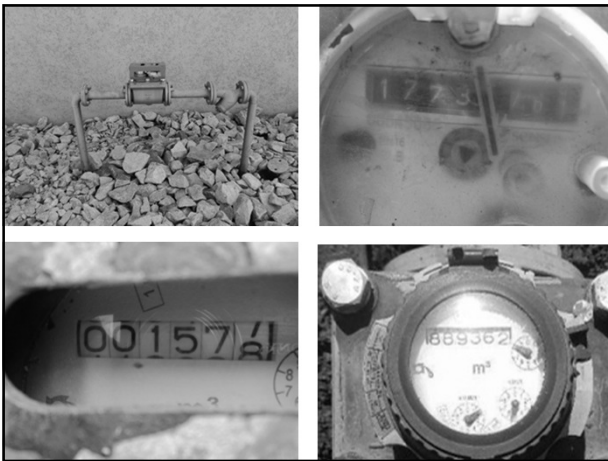
- 60 Pipe leaks have been reported and fixed

EMM - Wadeville Consumer Meter Upgrade Project WWP Consulting

206 Cr Deanna road and Manchester road 2013/206







Project Benefits

- Improved Consumer meter infrastructure
- Reduction in commercial losses
- Reduction in Physical losses
- Better understanding of distribution network
- Consumers motivated to repair leaks and operate more efficiently
- Relationship between council and bulk consumers greatly improved

Key success factors

- Applying a comprehensive work methodology
- Utilising an efficient and reliable database management system
- Continuous monitoring of the project area
- Continuous support from the municipality
- Capable and well qualified contractors
- Consultants with knowledge and relevant expertise

Conclusions

- The project is on-going – expected completion date is June 2015
- EMM plan to extend the project to all industrial Areas
- Substantial savings have already been achieved and the project is expected to have a payback period of less than 12 months
- There is potential to implement this type of project in most metros and municipalities

- Thank You -