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## Plan Overview

*A Data Management Plan created using UCT DMP*

**Title:** INVESTIGATION INTO THE EFFECTS OF ORE BLENDING AT TWO RIVERS PLATINUM MINE

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**Affiliation:** University of Cape Town

**Funder:** Two Rivers Platinum

**Template:** UCT Student Generic DMP

### Project abstract:

Due to challenges in meeting current UG2 ore mining targets, Two Rivers Platinum Mine in South Africa is exploring options for blending stockpiled Merensky ore with UG2 ore. Blending ores with significantly differing properties (e.g. hardness, mineralogy) is known to be susceptible to antagonistic effects. Therefore, a statistical design approach is used here to investigate the effects of blending normal UG2, altered UG2 (known to contain higher concentrations of alteration minerals - talc and serpentine) and Merensky ores. Laboratory test work focuses on the effects of Blending on Bond Work Index, flotation mass pull, as well as PGE recovery and grade. A systematic approach, utilizing Stat Ease Software supported by mineralogical analyses, will be employed to determine the optimum blending ration. By carefully managing ore blending the overall economics of mineral extraction become achievable reducing operational risk.

**ID:** 8689

**Start date:** 01-06-2024

**End date:** 30-06-2026

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### Copyright information:

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# INVESTIGATION INTO THE EFFECTS OF ORE BLENDING AT TWO RIVERS PLATINUM MINE - Student Outline DMP

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## 1. General guidelines

### PURPOSE OF THIS TEMPLATE

The purpose of the Outline DMP is to indicate your initial plans for how your data will be collected, shared and stored, and to give you a chance to think about these data-focused aspects of the research process. As you begin doing your research, your data process may change, and it is perfectly acceptable to change your data management plan to accommodate the changes in your research process.

Indicate below that you understand the purpose of completing this Outline DMP template.

- I understand the Outline DMP template is a projection of my anticipated data management planning requirements and should be updated as my project develops.

## 2. Authors and supervisors

### PROJECT NAME

Replicate the title of your project, dissertation or thesis exactly as it appears in your proposal document.

Project name: Investigation into the effects of ore blending at Two Rivers Platinum Mine

### PERSONAL DETAILS

Indicate the name(s) and student number(s) of the student(s) who will be involved in this project, dissertation or thesis.

Personal Details: Cynthia Simangele Bhengu - BHNSIM001

### SUPERVISOR(S) DETAILS

Indicate who will supervise this project, dissertation or thesis. If you do not yet have a supervisor, leave this section blank.

Supervisor details: Prof Megan Becker, A/Prof Belinda McFadzean, Prof Andre van der Westhuizen

## 3. Data Collection/Generation

### ORIGINAL DATA

Indicate whether you will collect or produce original data for your study. If yes, briefly describe the type of data and how you plan to manage it.

If you are unsure at this time, indicate what you think you are most likely to collect. If you are not intending to gather or collect your own data, declare that here.

- I intend to collect original data (described below).

I intend to collect mineralogical data, laboratory scale milling data, bond work index data as well as flotation test results under different conditions and the test conditions were simulated using statistical design method - Stat Ease Software.

### DATA RE-USE

Indicate if you intend to re-use existing data, either from online searches or from datasets provided by your supervisor, lab, or funder.

If you are not intending to re-use existing data, declare that here. Also note any restrictions that apply to the re-use of data.

- I do not intend to reuse existing data.

I do not intend to re-use existing data

### DATA SENSITIVITY & SECURITY

Indicate whether your research data may contain sensitive, personal, disclosive, or otherwise at-risk information.

If yes, briefly describe the type of sensitivity involved and the steps you will take to secure and control access to your data.

If you are unsure at this stage, indicate what you think is most likely. If your data is not sensitive, declare that here and state how you will still ensure responsible storage.

- My data is not sensitive or at-risk.

I will store my data in a secure folder and also back up my data using a service provided by (ARM Onedrive)

## 4. Data Storage

### DATA SIZE ESTIMATE

Indicate the estimated size of your completed dataset, and indicate whether or not you will need to access additional data storage facilities. If such storage is not provided by your unit or department, you may need to factor in the cost of purchasing additional storage space.

- 20GB or less

### DATA BACKUPS

Indicate how you plan to ensure your data is secure and retrievable in case of errors or hardware failure. Describe what procedures you will put in place to back-up copies of your data and where they will be stored.

- I intend to backup my data using a service provided by UCT (UCT GoogleDrive, UCT OneDrive, Netstorage, ZivaHub etc.).

During my data collection and analysis phase, I will back up my data each month to my UCT OneDrive account and I also intend to use ARM OneDrive as back up.

## 5. Data Sharing/Publication

### DATA SHARING

According to UCT's [Research Data Management policy](#), research data should be made open by default, with provisions for making it closed in specific cases (such as ethical considerations or potential commercialisation).

Indicate whether you plan to publish your research data.

- If yes: say where you will publish it and what licence (e.g., Creative Commons) you will use.
- If no: explain why, and refer to any ethical issues, commercial or patent intentions, or data-use agreements that prevent publication.

- I intend to share my data (details below).

I will openly share my data with the institution and my employer who is funding the project.

Final approval for sharing data (publication) needs to be signed off by Two Rivers Platinum, but it is not anticipated that there will be any issues in this regard.

### DATA DESCRIPTION

What information will you include to help others understand and use your dataset?

(For example: a short description of your study, explanations of variables, survey questions, or keywords. These are known as metadata.)

N/A

## 6. Budget

### BUDGET

Indicate any costs specifically relating to the management and curation of your data, such as purchasing additional storage space, digitisation of physical media, data storage or curation charges, and data audits. Most student research will be able to make use of free options provided by UCT and will not have to budget for data costs.

- I do not anticipate any data costs as my data is less than 10GB, and I will be using a storage system provided by UCT (UCT GoogleDrive, UCT OneDrive, Netstorage, ZivaHub, etc.) to curate my data.