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## Plan Overview

*A Data Management Plan created using DMPonline*

**Title:** The evolution of the time-dependent excavation damaged zone (EDZ) and its effects on tunnel performance assessment in shale formations

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# The evolution of the time-dependent excavation damaged zone (EDZ) and its effects on tunnel performance assessment in shale formations

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## Data description

### What types of data will be used or created?

My research has two parts (i.e. Laboratory tests and numerical modeling). So Lab testing data will be created. In addition, numerical modeling software inputted parameters will be got from literature. subsequently, simulated digital data will be created.

### How will the data be structured and documented?

Laboratory Tests:

1. Data will be booked and inputted into EXCEL;
2. Data which have been filed will be analyzed by EXCEL or SPSS.

Numerical Modeling:

1. Data will be collected from my simulation software (e.g. ABAQUS and FLAC3D). subsequently, these data will be filed as a textbook ;
2. Data in the textbook file will be inputted into EXCEL;
3. Data will be analyzed by EXCEL or SPSS.

## Data storage and archiving

### How will your data be stored and backed up?

1. Data files will be stored on the computer and will be backed up in my personal USB;
2. If it's in need, we will use UoB IT services provided research data store and archive

### Is any of the data of (ethically or commercially) sensitive nature? If so, how do you ensure the data are protected accordingly?

No, I don,t have any sensitive data.

### Where will your data be archived in the long term?

At the publication of a paper, a subset of the data that underpins the paper will be transferred to the UoB Research Data Archive (RDA). Once transferred the data will be set to read-only to prevent any inadvertent additions or deletions of the dataset, Any changes will result in a new dataset, which will be archived separately. The RDA solution has been created to be highly resilient and is located at two data centers in two different sites, with a backup placed in a third site. Data will be stored for 10 years, should access to the data be requested within a 10 year period, the 10 year clock is then reset from the point of last access. After the 10 year period the data will be deleted.

## Data sharing

### Which data will you share, and under which conditions? How will you make the data available to others?

Data will be shared through the University of Birmingham's eData repository (<https://edata.bham.ac.uk/>) which makes the datasets discoverable through search engines like Google. eData uses Dublin Core as a metadata standard and the minimum metadata provided for published datasets will cover amongst others title, type of data, creators, publication date and related publications.