



Government of Western Australia
Department of Mines, Industry Regulation and Safety

Programme of Work – Spatial Upload Formats

Version 2 (5 December 2017)

Table of Contents

INTRODUCTION	3
FILE FORMATS	3
PROJECTION	3
ACTIVITIES	4
FURTHER ASSISTANCE	4
DRILL POINTS.....	5
DRILL LINE	7
DRILL POLYGON	9
COSTEAN	12
EXCAVATION	13
TEST PITS	14
TRACK	16
CAMP SITE	17
SAMPLE FARM.....	18
SURFACE DISTURBANCE	19

Introduction

The Department of Mines, Industry Regulation and Safety (DMIRS) now supports online spatial lodgement of Programmes of Work (POW-S). The new POW-S system enables proponents to draw or upload their activities spatially, resulting in a smarter, more user-friendly application experience.

Spatial data needs to be formatted in a certain way so that the POW-S system can generate your application. This document sets out the requirements for uploading spatial data.

File Formats

The following data formats are supported by POW-S:

- Shapefile (ESRI ArcGIS)
- TAB File (MapInfo)

The POW-S upload system requires the following constituent data files to be uploaded as a minimum:

Shapefile	.dbf (attribute data) .prj (coordinate system and projection) .shp (feature geometry)
TAB File	.DAT (attribute data) .ID (links graphic data to database information) .MAP (graphic and geographic information) .TAB (link to all data files)

Projection

The projection of the spatial files must be geo-referenced to either of the following:

- GDA94 (GCS_GDA_94 in ESRI system)
- Any Map Grid of Australia (MGA) projected coordinate system with Eastings and Northings (ie. GDA_94_MGA_Zone_[49-52])
- WGS84

Data containing geometries specified using geographical (longitude and latitude) or projected (eastings and northings) coordinate systems can be used. The datum of the uploaded data must be unambiguously compatible with the Geocentric Datum of Australia (GDA94).

Activities

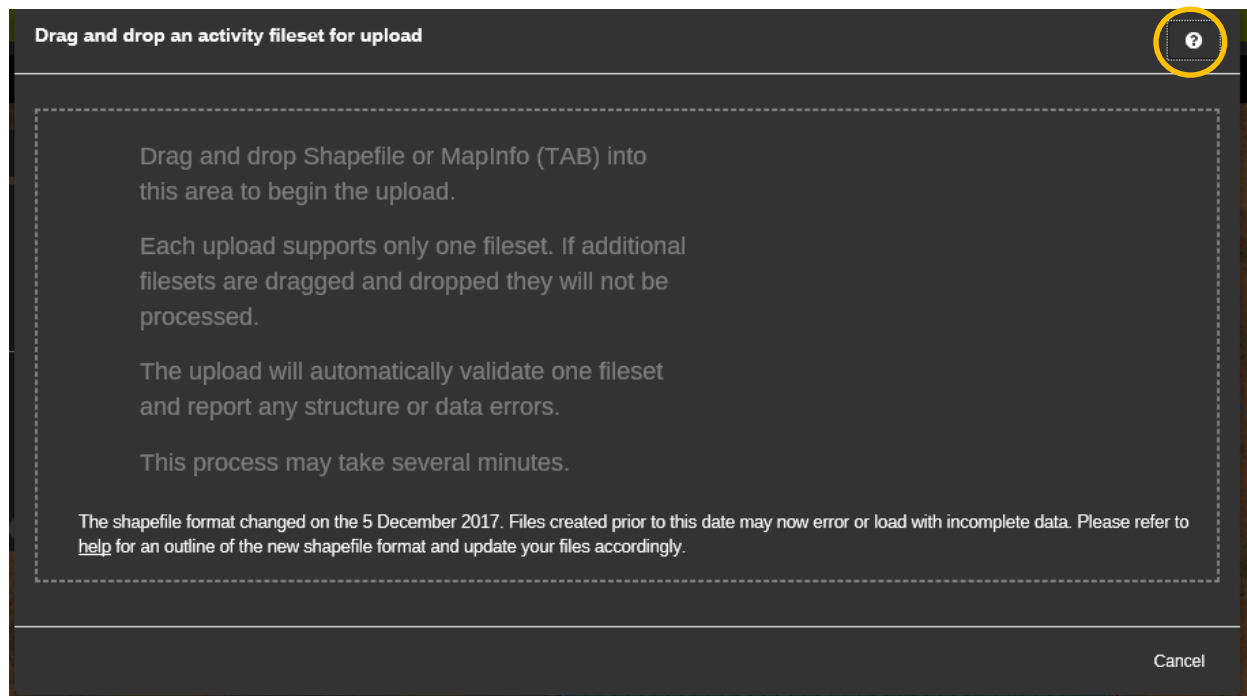
The following activities can be uploaded spatially.

- Drilling (Point, Line, Polygon)
- Costean
- Excavation
- Test Pits
- Tracks
- Campsite
- Core Sample Farm
- Surface Disturbance

Proponents will be required to provide spatial files that contain the required table structure (fields/columns) and attribute data outlined below. The spatial upload tool will validate your data and return relevant errors if the following standards are not met.

Further Assistance

For further information regarding uploading, please refer to the PoW Spatial Help website, which is accessible from the upload dialog box.



Enquiries can also be sent to PoWSpatial@dmirs.wa.gov.au.

Drill Points

POW Activity Type	DRILLING
Geometry Type	Point
Description	A single drill hole point and pad

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
TARGET		Text	20	Character	7	<ul style="list-style-type: none"> • Mineral • Water 	Yes
DRILL_TYPE		Text	20	Character	20	<ul style="list-style-type: none"> • Auger • AirCore • RAB • Vacuum • Sonic <ul style="list-style-type: none"> • RC • Diamond • RotaryMud • Other 	Yes
DT_OTHER	Drill Type Other	Text	50	Character	50		Only if DRILL_TYPE = Other
DEPTH	Maximum Hole Depth (m)	Double	9999.99	Decimal	9999.99	≤ 9,999m	Yes
PAD		Short Integer	1	Integer	1	0 (No) 1 (Yes)	Yes
PAD_L	Pad Length (m)	Double	99.99	Decimal	99.99	≤ 99m	Yes Must be 0m if no pads

PAD_W	Pad Width (m)	Double	99.99	Decimal	99.99	≤ 99m Must be 0m if no pads	Yes
INFILL	Infill / Resource Definition	Short Integer	1	Integer	1	0 (No) 1 (Yes)	Yes
GW	Groundwater	Short Integer	1	Integer	1	0 (No) 1 (Yes)	Yes
SUMP		Short Integer	1	Integer	1	0 (No) 1 (Yes)	Yes
SUMP_L	Sump Length (m)	Double	99.99	Decimal	99.99	> 0m ≤ 99m	Only if SUMP = 1
SUMP_W	Sump Width (m)	Double	99.99	Decimal	99.99	> 0m ≤ 99m	Only if SUMP = 1
SUMP_D	Sump Depth (m)	Double	99.99	Decimal	99.99	> 0m ≤ 99m	Only if SUMP = 1
SUMP_INPAD	Sump Within Pad	Short Integer	1	Integer	1	0 (No) 1 (Yes)	Only if SUMP = 1
CUT_FILL	Cut Fill Pads	Short Integer	1	Integer	1	0 (No) 1 (Yes)	Yes
CF_SLOPE	Cut Fill Slope	Double	99.99	Decimal	99.99	≤ 89	Only if CUT_FILL = 1
CF_BD	Cut Fill Bulk Density	Double	99.99	Decimal	99.99	> 0 ≤ 9	Only if CUT_FILL = 1
COMMENTS		Text	500	Character	254		Optional
USER_TON	User Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
USER_TON_ R	User Tonnes Reason	Text	500	Character	254		Only if USER_TON field present and > 0
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 20m if field is absent	Optional

Drill Line

POW Activity Type	DRILLING
Geometry Type	Line
Description	One or more drill holes along a drill line.

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
TARGET		Text	20	Character	7	<ul style="list-style-type: none"> • Mineral • Water 	Yes
DRILL_TYPE		Text	20	Character	20	<ul style="list-style-type: none"> • Auger • AirCore • RAB • Vacuum • Sonic <ul style="list-style-type: none"> • RC • Diamond • RotaryMud • Other 	Yes
DT_OTHER	Drill Type Other	Text	50	Character	50	Explain drilling methods	Only if DRILL_TYPE = Other
HOLE_COUNT		Long Integer	99999	Integer	99999	> 0	Yes
DEPTH	Maximum Hole Depth (m)	Double	9999.99	Decimal	9999.99	> 0m ≤ 9,999m	Yes
TRACK_L	Track Length	Double	99999.99	Decimal	99999.99	≤ 999,999m	Optional

TRACK_W	Track Width	Double	99.99	Decimal	99.99	≤ 99m	Only if TRACK_L > 0
PAD_COUNT		Long Integer	999999	Integer	999999	0 = no pads	Yes
PAD_L	Pad Length (m)	Double	99.99	Decimal	99.99	≤ 99m Must be 0m if no pads	Yes
PAD_W	Pad Width (m)	Double	99.99	Decimal	99.99	≤ 99m Must be 0m if no pads	Yes
INFILL	Infill / Resource Definition	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
MIN_SPAC	Minimum Spacing (m)	Double	9999.99	Decimal	9999.99	> 0m	Yes
GW	Groundwater	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
SUMP		Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
SUMP_COUNT		Long Integer	999999	Integer	999999		Only if SUMP = 1
SUMP_L	Sump Length (m)	Double	99.99	Decimal	99.99	≤ 99m	Only if SUMP = 1
SUMP_W	Sump Width (m)	Double	99.99	Decimal	99.99	≤ 99m	Only if SUMP = 1
SUMP_D	Sump Depth (m)	Double	99.99	Decimal	99.99	≤ 99m	Only if SUMP = 1
SUMP_INPAD	Sump Within Pad	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Only if SUMP = 1
CUT_FILL	Cut Fill Pads	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
CF_COUNT	Number Cut Fill Pads	Long Integer	999999	Integer	999999		Only if CUT_FILL = 1

CF_SLOPE	Cut Fill Slope	Double	99.99	Decimal	99.99	≤ 89	Only if CUT_FILL = 1
CF_BD	Cut Fill Bulk Density	Double	9.99	Decimal	9.99	> 0 ≤ 9	Only if CUT_FILL = 1
COMMENTS		Text	500	Character	254		Optional
USER_TON	User Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
USER_TON_R	User Tonnes Reason	Text	500	Character	254		Only if USER_TON field present and > 0
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 20m if field absent	Optional

Drill Polygon

POW Activity Type	DRILLING
Geometry Type	Polygon
Description	One or more drill holes in a drilling area.

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
TARGET		Text	20	Character	7	<ul style="list-style-type: none"> • Mineral • Water 	Yes

DRILL_TYPE		Text	20	Character	20	<ul style="list-style-type: none"> • Auger • AirCore • RAB • Vacuum • Sonic • RC • Diamond • RotaryMud • Other 	Yes
DT_OTHER	Drill Type Other	Text	50	Character	50	Explain drilling methods	Only if DRILL_TYPE = Other
HOLE_COUNT		Long Integer	99999	Integer	99999	> 0	Yes
DEPTH	Maximum Hole Depth (m)	Double	9999.99	Decimal	9999.99	> 0m ≤ 9,999m	Yes
TRACK_L	Track Length	Double	99999.99	Decimal	99999.99	≤ 999,999m	Optional
TRACK_W	Track Width	Double	99.99	Decimal	99.99	≤ 99m	Only if TRACK_L > 0
PAD_COUNT		Long Integer	999999	Integer	999999	0 = no pads	Yes
PAD_L	Pad Length (m)	Double	99.99	Decimal	99.99	≤ 99m Must be 0m if no pads	Yes
PAD_W	Pad Width (m)	Double	99.99	Decimal	99.99	≤ 99m Must be 0m if no pads	Yes
INFILL	Infill / Resource Definition	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
MIN_SPAC	Minimum Spacing (m)	Double	9999.99	Decimal	9999.99	> 0m	Yes
GW	Groundwater	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
SUMP		Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
SUMP_COUNT		Long Integer	999999	Integer	999999		Only if SUMP = 1

SUMP_L	Sump Length (m)	Double	99.99	Decimal	99.99	≤ 99m	Only if SUMP = 1
SUMP_W	Sump Width (m)	Double	99.99	Decimal	99.99	≤ 99m	Only if SUMP = 1
SUMP_D	Sump Depth (m)	Double	99.99	Decimal	99.99	≤ 99m	Only if SUMP = 1
SUMP_INPAD	Sump Within Pad	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Only if SUMP = 1
CUT_FILL	Cut Fill Pads	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
CF_COUNT	Number Cut Fill Pads	Long Integer	999999	Integer	999999		Only if CUT_FILL = 1
CF_SLOPE	Cut Fill Slope	Double	99.99	Decimal	99.99	≤ 89	Only if CUT_FILL = 1
CF_BD	Cut Fill Bulk Density	Double	99.99	Decimal	99.99	> 0 ≤ 9	Only if CUT_FILL = 1
COMMENTS		Text	500	Character	254		Optional
USER_TON	User Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
USER_TON_R	User Tonnes Reason	Text	500	Character	254		Only if USER_TON field present and > 0
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 0m if field absent	Optional

Costean

POW Activity Type	COSTEAN
Geometry Type	Line
Description	A line representing an excavation costean

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
WIDTH		Double	99.99	Decimal	99.99	> 0m ≤ 99m	Yes
DEPTH		Double	99.99	Decimal	99.99	> 0m ≤ 9,999m	Yes
BD	Bulk Density	Double	9.99	Decimal	9.99	> 0 ≤ 9	Yes
COMMENTS		Text	500	Character	254		Optional
USER_TON	User Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
USER_TON_R	User Tonnes Reason	Text	500	Character	254		Only if USER_TON field present and > 0
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 20m if field absent	Optional

Excavation

POW Activity Type	EXCAVATION
Geometry Type	Polygon
Description	A polygon area representing an excavation

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
DIST_TYPE	Disturbance Type	Text	20	Character	20	<ul style="list-style-type: none"> • BulkSampling • TestPits • BorrowPit • ScrapeDetect • SmallShaft • DisposalPit • Other 	Yes
DIST_TYPEO	Disturbance Type Other	Text	300	Character	254	Explain disturbance type	Only if DIST_TYPE = 'Other'
PRO_TYPE	Processing Type	Text	20	Character	20	<ul style="list-style-type: none"> • None • Dryblowing • Small Plant • WetPlant • Other 	Yes
PRO_TYPEO	Processing Type Other	Text	300	Character	254	Explain processing type	Only if PRO_TYPE = 'Other'
DEPTH		Double	99.99	Decimal	99.99	> 0m ≤ 999m	Yes

REMOVED_TO	Removed Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
BD	Bulk Density	Double	9.99	Decimal	9.99	> 0 ≤ 9	Yes
COMMENTS		Text	500	Character	254		Optional
USER_TON	User Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
USER_TON_R	User Tonnes Reason	Text	500	Character	254		Only if USER_TON field present and > 0
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 50m if field absent	Optional

Test Pits

POW Activity Type	TEST_PIT
Geometry Type	Polygon
Description	One or more test pits in an area

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
COUNT		Long Integer	99999	Integer	99999	> 0	Yes

WIDTH		Double	99.99	Decimal	99.99	> 0m ≤ 99m	Yes
LENGTH		Double	99.99	Decimal	99.99	> 0m ≤ 99m	Yes
DEPTH		Double	999.99	Decimal	999.99	> 0m ≤ 99m	Yes
BD	Bulk Density	Double	9.99	Decimal	9.99	> 0 ≤ 9	Yes
MIN_SPAC	Minimum Spacing (m)	Double	9999.99	Decimal	9999.99	> 0m	Yes
TRACK_L	Track Length	Double	99999.99	Decimal	99999.99	≤ 99,999m	Optional
TRACK_W	Track Width	Double	99.99	Decimal	99.99	≤ 99m	Only if TRACK_L > 0
CUT_FILL_T	Cut Fill Tracks	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
CFT_SLOPE	Cut Fill Track Slope	Double	99.99	Decimal	99.99	≤ 89	Only if CUT_FILL_T = 1
CFT_BD	Cut Fill Track Bulk Density	Double	9.99	Decimal	9.99	> 0 ≤ 9	Only if CUT_FILL_T = 1
REMOVED_TO	Removed Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
COMMENTS		Text	500	Character	254		Optional
USER_TON	User Tonnes	Double	99999.99	Decimal	99999.99	≤ 99,999t	Optional
USER_TON_R	User Tonnes Reason	Text	500	Character	254		Only if USER_TON field present and > 0
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 0m if field absent	Optional

Track

POW Activity Type	TRACK
Geometry Type	Line
Description	A line representing a single track

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
TRACK_TYPE		Text	20	Character	20	<ul style="list-style-type: none"> • New • Other • POW 	Yes
TYPE_OTHER		Text	50	Character	50		Only if TRACK_TYPE = 'Other'
TYPE_POW		Text	50	Character	50	Give Registration ID of the POW existing track was approved under	Only if TRACK_TYPE = 'POW'
WIDTH	Track Width	Double	99.99	Decimal	99.99	≤ 99m	Yes
CUT_FILL	Cut Fill	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
CF_SLOPE	Cut Fill Slope	Double	99.99	Decimal	99.99	≤ 89	Only if CUT_FILL = 1
CF_BD	Cut Fill Bulk Density	Double	9.99	Decimal	9.99	> 0 ≤ 9	Only if CUT_FILL = 1

CAUSEWAY		Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
C_HEIGHT	Causeway Height	Double	99.99	Small Integer	1	> 0m ≤ 99m	Only if CAUSEWAY = 1
COMMENTS		Text	500	Character	254		Optional
USER_TON	User Tonnes	Double	99999.99	Decimal	99999.99	> 0t ≤ 99,999t	Optional
USER_TON_R	User Tonnes Reason	Text	500	Character	254		Only if USER_TON field present and > 0
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 20m if field absent	Optional

Camp Site

POW Activity Type	CAMPSITE
Geometry Type	Polygon
Description	A polygon area representing a camp

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
CAMP_TYPE		Text	20	Character	20	<ul style="list-style-type: none"> Fixed Mobile 	Yes

COMMENTS		Text	500	Character	254		Optional
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 20m if field absent	Optional

Sample Farm

POW Activity Type	CORE_SAMPLE_FARM
Geometry Type	Polygon
Description	A polygon area representing a core or bag sample farm/storage

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
SAMPLE_TYP	Sample Type	Text	20	Character	20	<ul style="list-style-type: none"> • Bags • CoreBags • Core 	Yes
SEMI_PERM	Semi-Permanent	Short Integer	1	Small Integer	1	0 (No) 1 (Yes)	Yes
COMMENTS		Text	500	Character	254		Optional
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 20m if field absent	Optional

Surface Disturbance

POW Activity Type	SURFACE_DISTURBANCE
Geometry Type	Polygon
Description	A polygon area representing any other surface disturbance not covered by the other activities

Table Structure

Field Name	Field Name Description	ESRI Shapefile		MapInfo TAB File		Values	Required
		Field Type	Length	Field Type	Length		
NAME		Text	300	Character	254		Optional
DIST_TYPE	Disturbance Type	Text	20	Character	20	<ul style="list-style-type: none"> • Laydown • Other 	
DIST_TYPEO	Disturbance Type Other	Text	300	Character	50	Explain disturbance	Only if DIST_TYPE = 'Other'
COMMENTS		Text	500	Character	254		Optional
BUFFER_M	Buffer Meters	Long Integer	999999	Integer	999999	Default to 20m if field absent	Optional