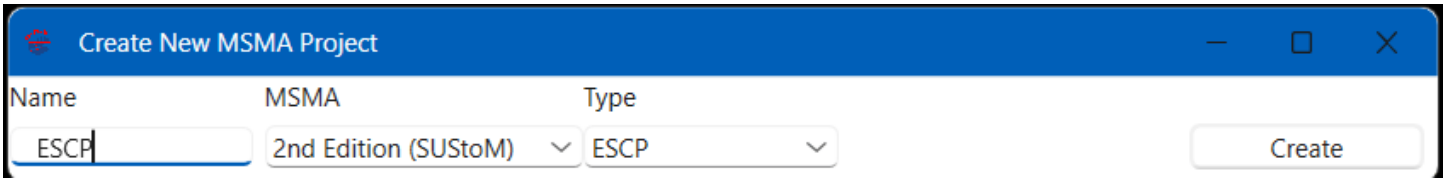
EROSION AND SEDIMENT CONTROL PLAN (ESCP)

MSMA 2nd Edition · https://mes100.com/docs/erosion-and-sediment-control-plan-escp-2/

ESCP

Click Add in Project View to create a new MSMA project. Choose ESCP, select MSMA 2nd Edition and create the name of the project. Then, click Create.

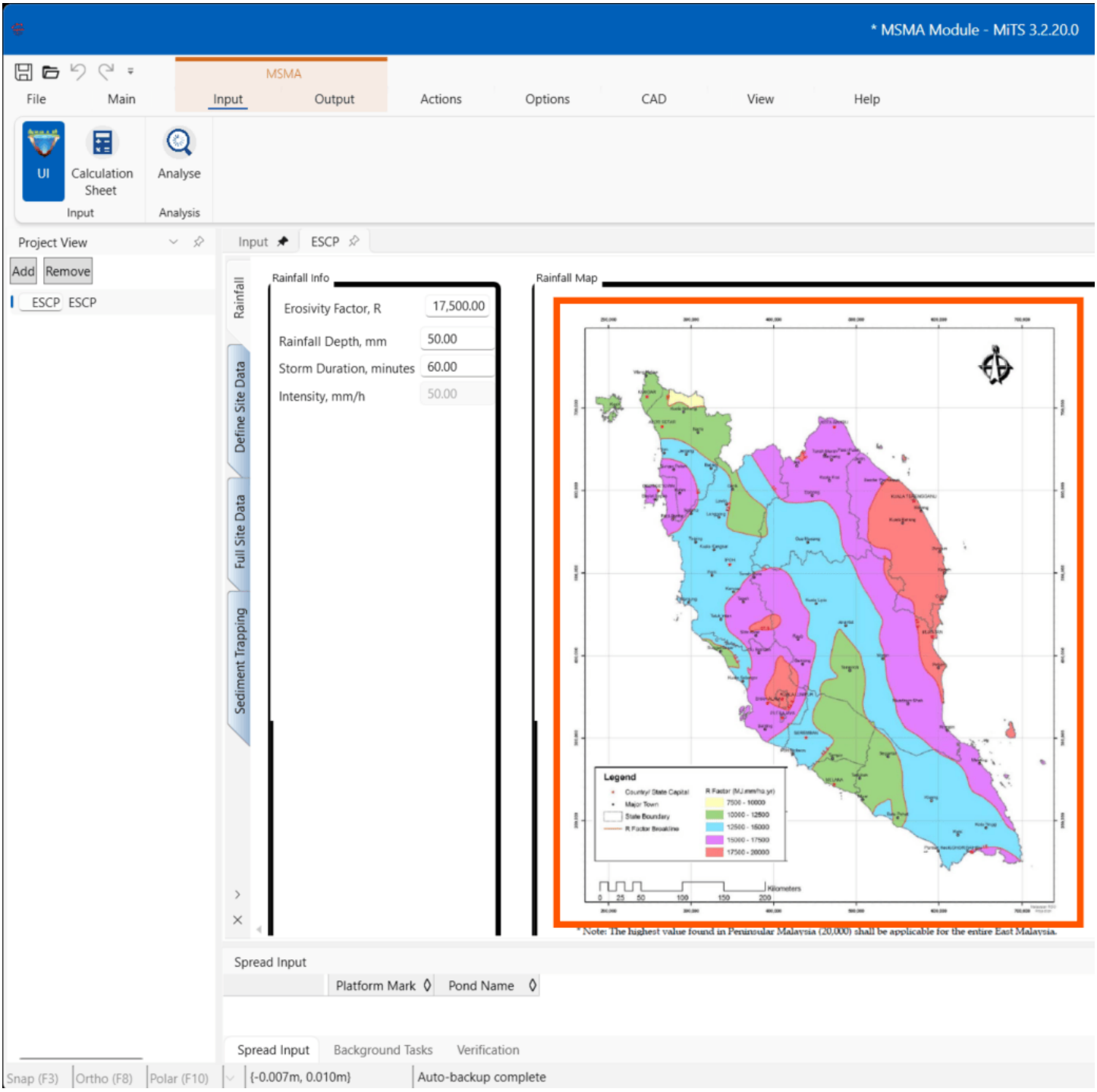


Manual of Culvert is linked to our blog. Click this link (**ESCP manual**) for reference.

Rainfall Data

Insert all the input below;

1. Erosivity Factor, R. Use can refer to the Rainfall Map for the R value.



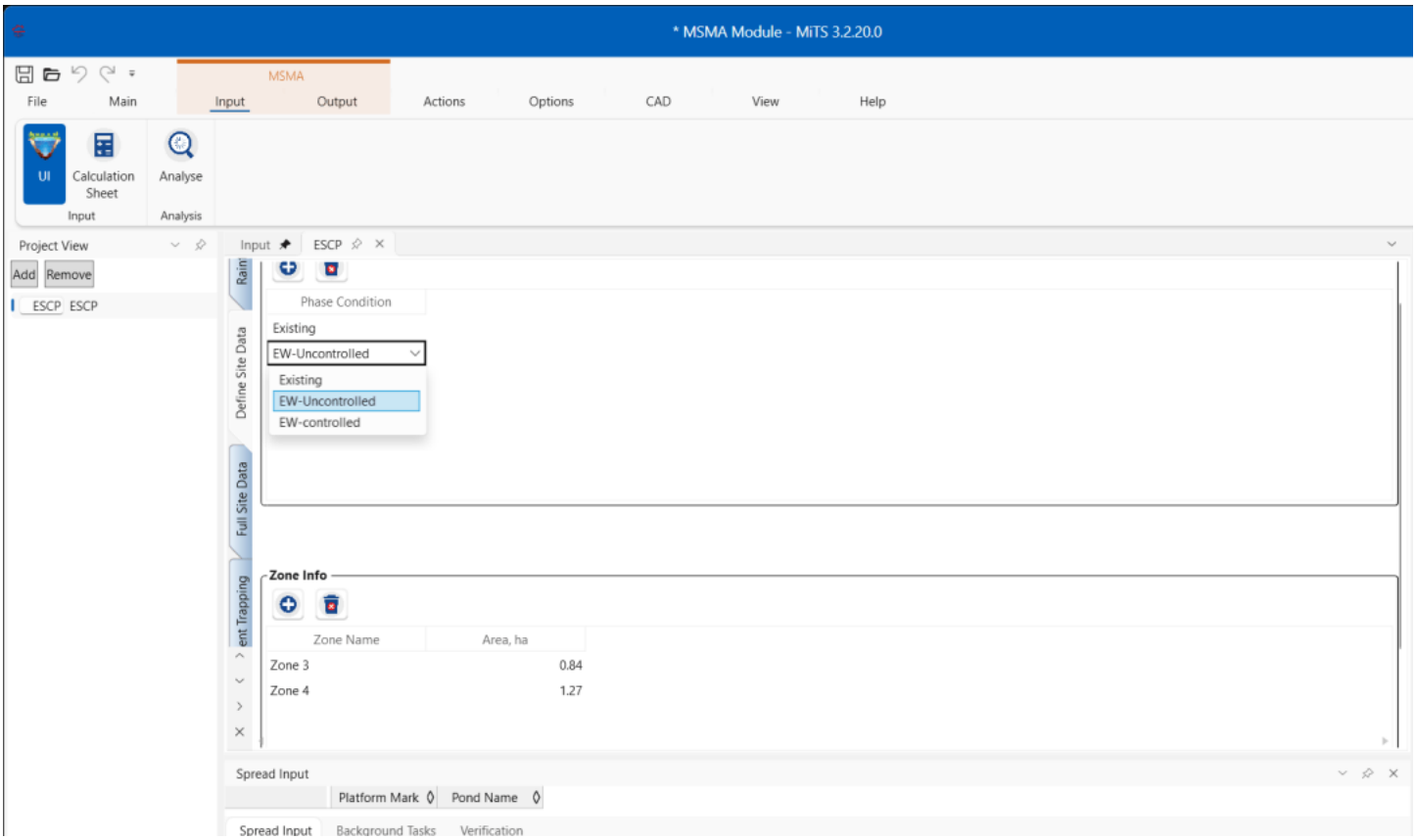
2. Insert the Rainfall Depth. User can refer to "IDF" to obtain rainfall intensity for a given rainfall duration and ARI. Then use the IDF relationship to find the corresponding rainfall depth.

Rainfall depth (P_d) = Rainfall Intensity (mm/hr) x Storm Duration (hr)

3. Insert the Storm Duration

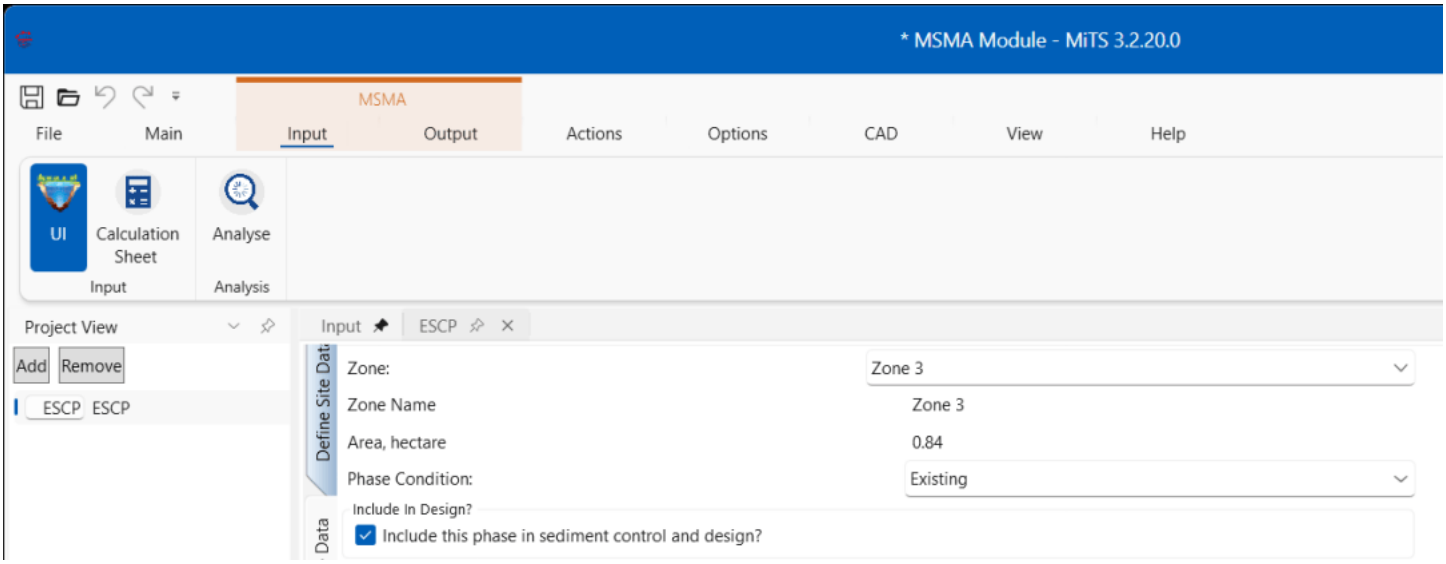
Define Site Data

1. Define Phase Condition
2. Define Zone Info

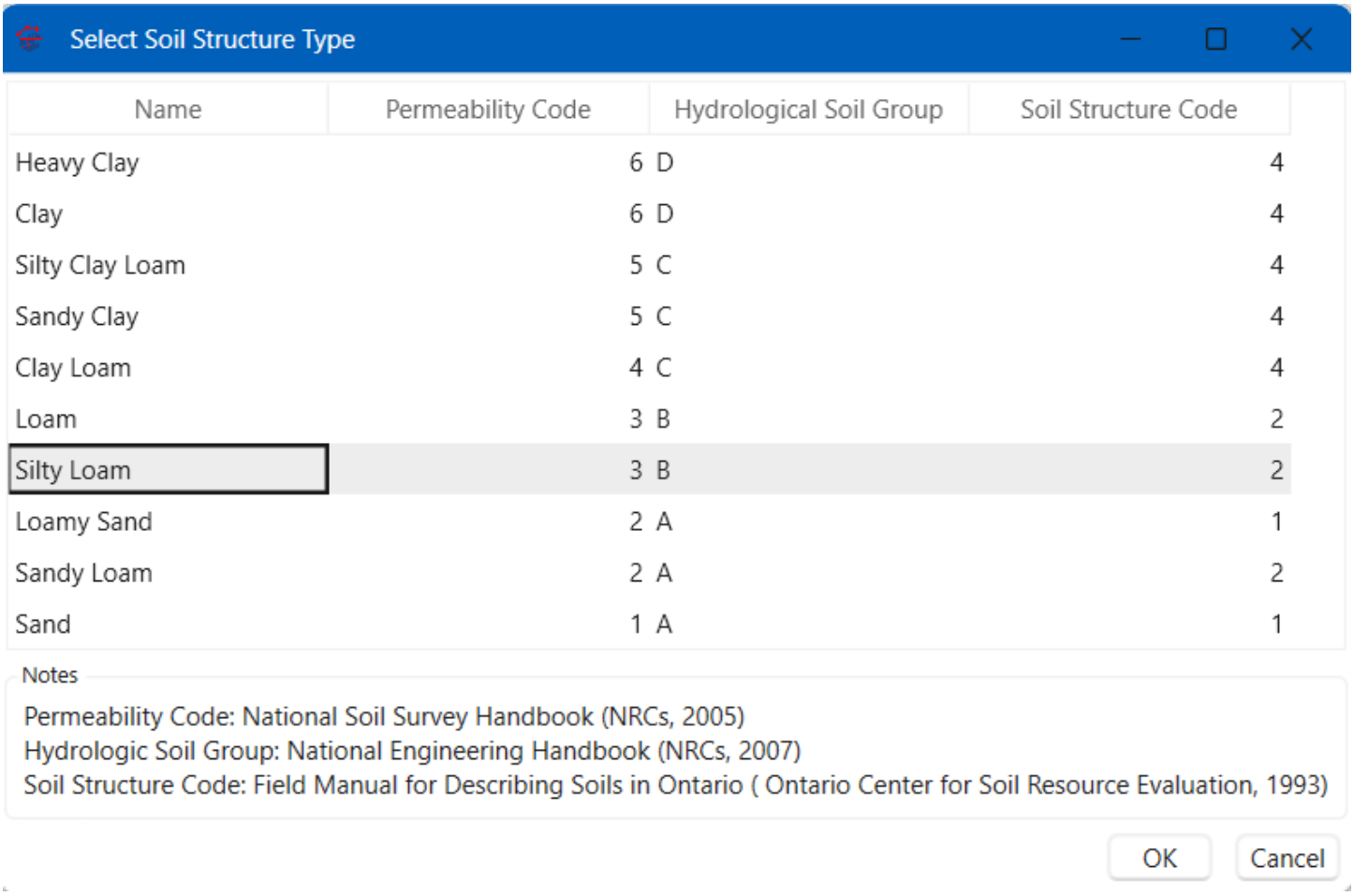


Full Site Data

1. Choose the Zone that wants to be analyzed
2. Choose the phase condition.
3. Tick at the *Include In Design* if user wants to consider the sediment control in the design.

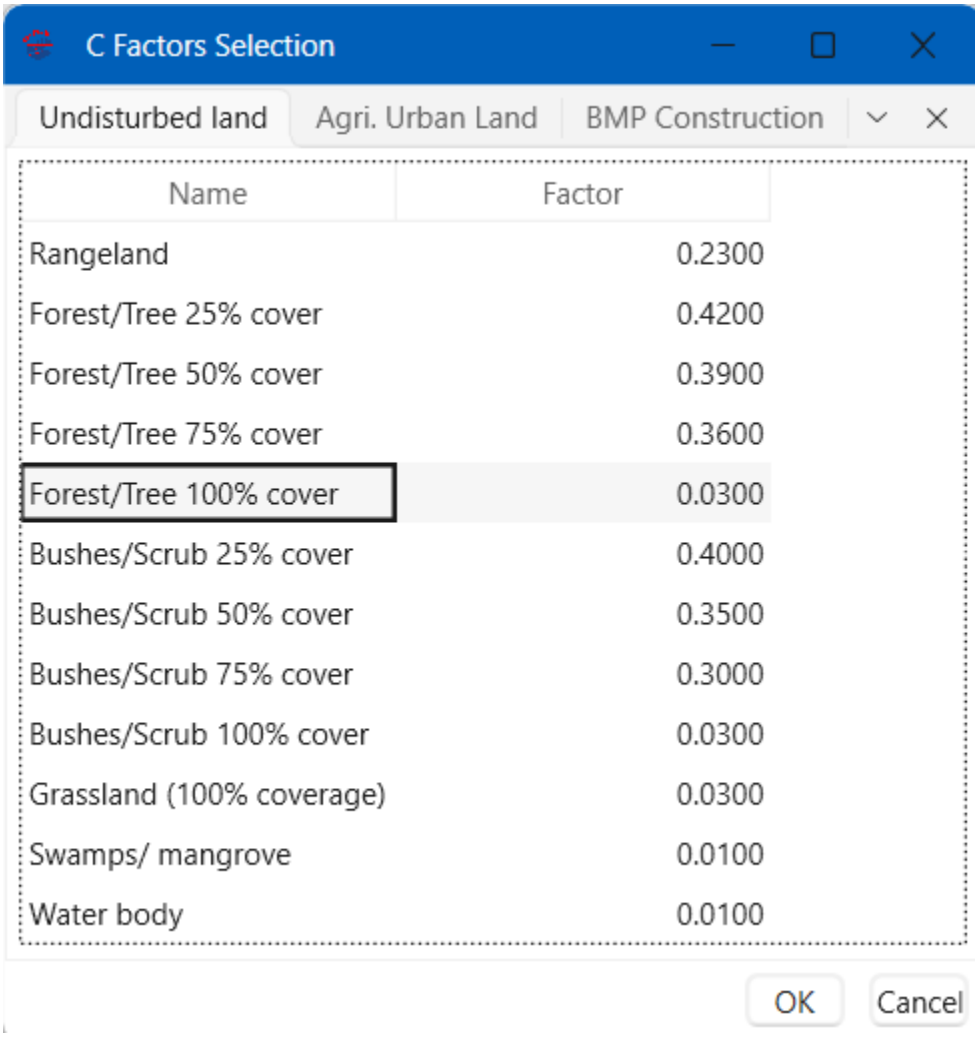


4. Determine the soil texture composition by clicking the "three dots" button
5. Select the soil structure type by clicking the "three dots" button. Then click OK

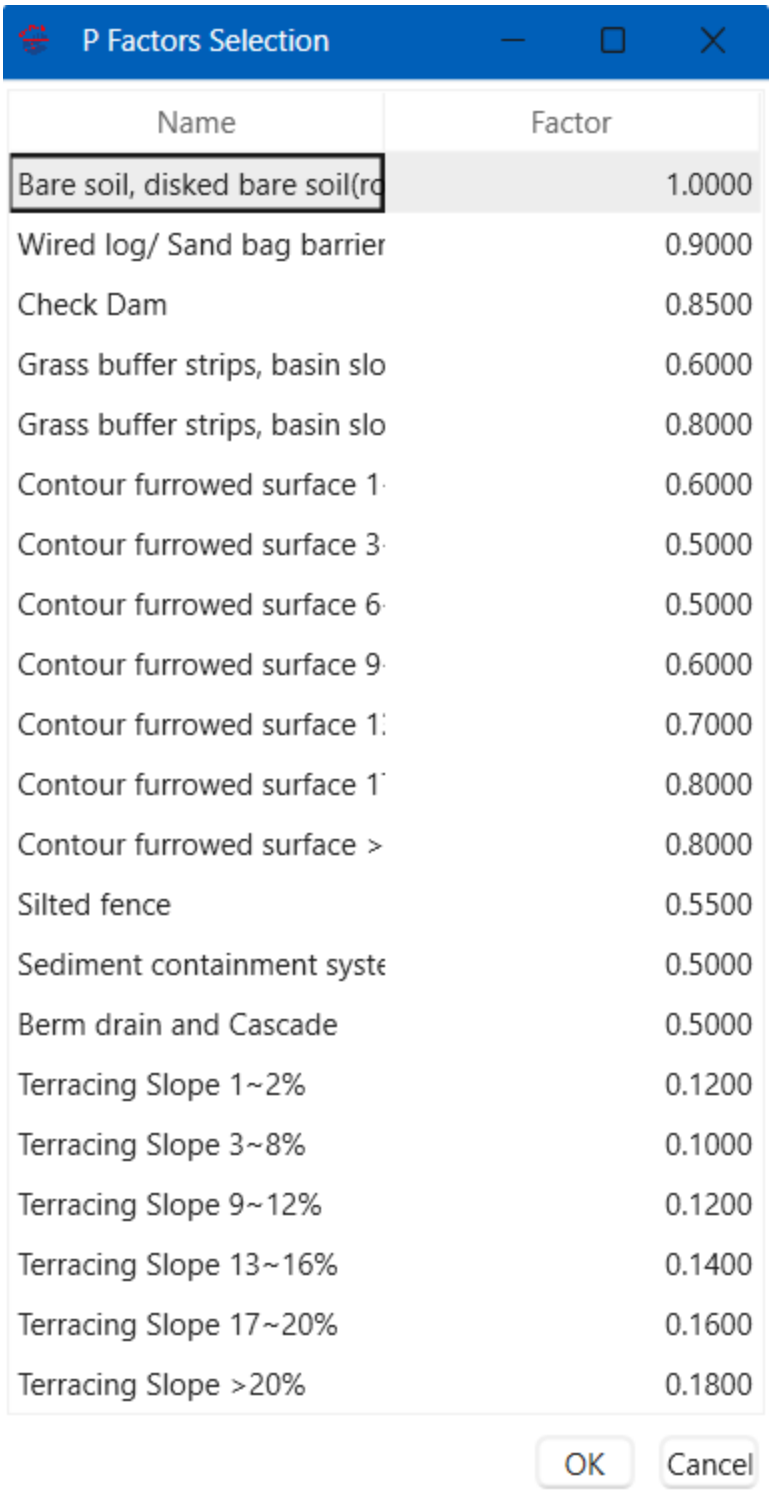


6. Determine the K value or use the default value by clicking the 'Default' button
7. Calculate LS factors by inserting the length and steepness of the area

8. Determine the C factor by clicking the "three dots" button, then choosing the type of land use. Next, click OK



9. Determine the P factor by clicking "three dots" button, then choose the surface condition. Next, click OK



10. Determine the runoff coefficient by clicking the "three dots" button and then choose the C value.
11. Determine the Tc value.

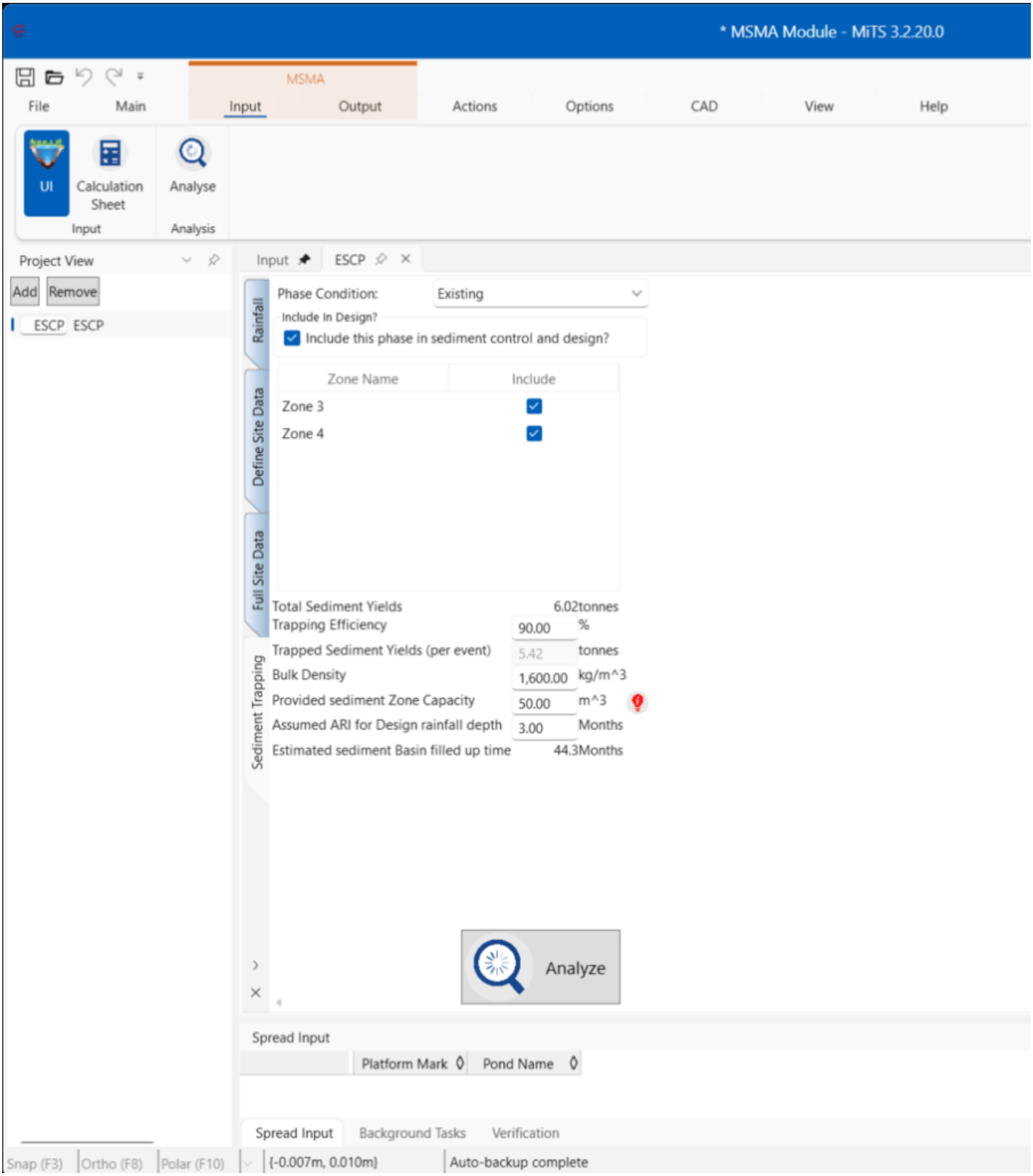
Runoff Coefficient

Landuse	Runoff Coefficient (C)	
	For Minor System (<= 10 year ARI)	For Major System (> 10 year ARI)
Residential		
Bungalow	0.65	0.7
Semi-detached Bungalow	0.7	0.75
Link and Terrace House	0.8	0.9
Flat and Appartment	0.8	0.85
Condominium	0.75	0.8
Commercial and Business Centres	0.9	0.95
Industrial	0.9	0.95
Sport Fields, Park and Agriculture	0.3	0.4
Open Spaces		
Bare Soil (No Cover)	0.5	0.6
Grass Cover	0.4	0.5
Bush Cover	0.35	0.45
Forest Cover	0.3	0.4
Roads and Highways	0.95	0.95
Water Body (Pond)		
Detention Pond (with outlet)	0.95	0.95
Detention Pond (no outlet)	0	0

Note: The runoff coefficients in this table are given as a guide for designers. The near-field runoff coefficient for any single or mixed landuse should be determined based on the imperviousness of the area.

Sediment Trapping

1. Choose the Phase Condition
2. Tick at the *Include In Design* if user wants to consider the sediment control in the design.



3. Determine trapping efficiency
4. Determine bulk density

5. Determine the provided sediment zone capacity
6. Determine the assumed ARI for design rainfall depth
7. Click Analyze

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I'm the Benevolent Dictator for Life for MiTS Software cum Editor of this website. Read more here.

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