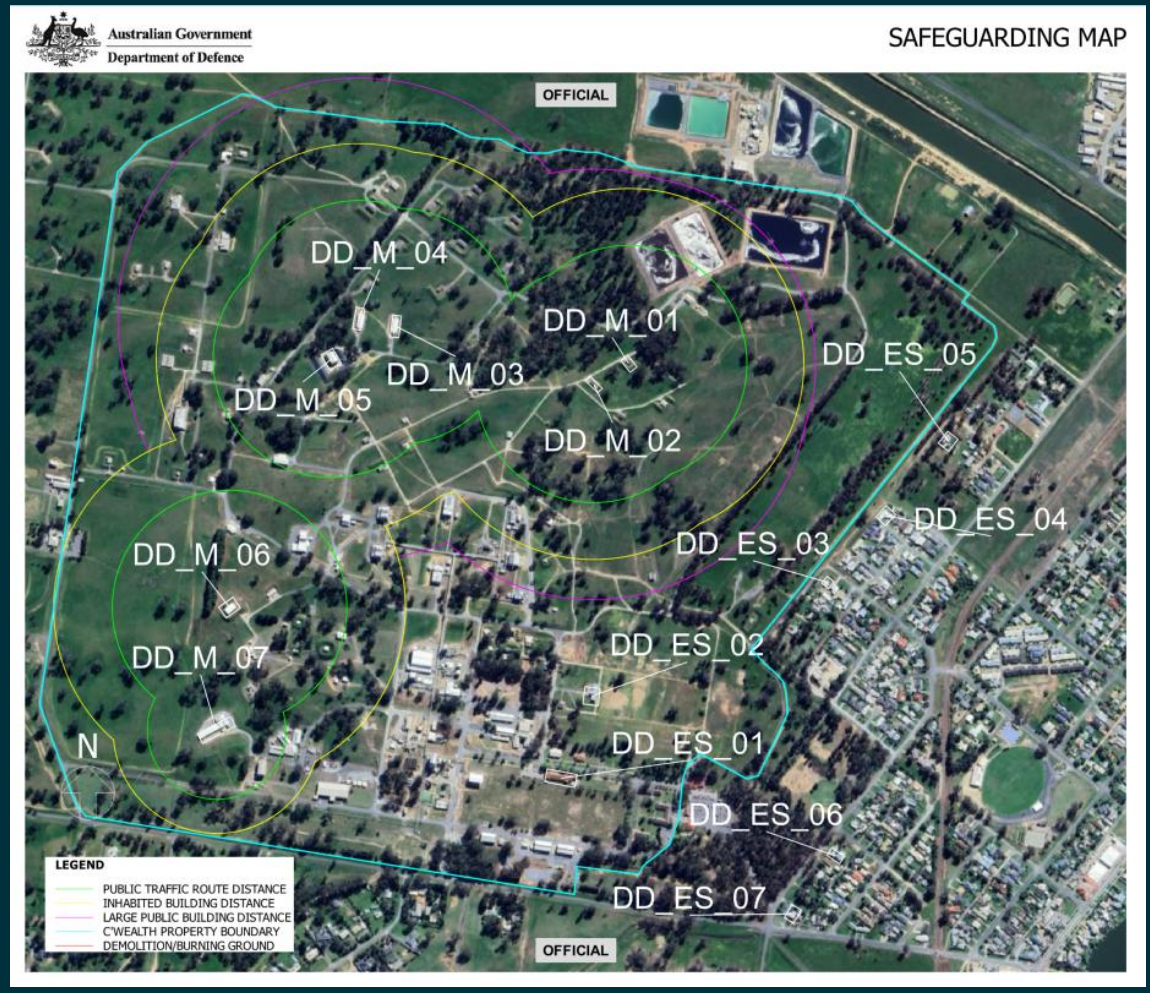
NOVEMBER 26, 2026

# The Field Deployable Siting and Licensing Tool

## An Update in 2026

Rhys Centin
Project Engineer
Thornton Tomasetti Pty Ltd

Thornton Tomasetti



# OUR LOCATIONS

## Australia




**2,300**
ENGINEERS, ARCHITECTS, SCIENTISTS AND OTHER PROFESSIONALS

**150+**
COUNTRIES WORKED IN

**40+**
OFFICES

**8,000+**
ACTIVE PROJECTS

Thornton Tomasetti

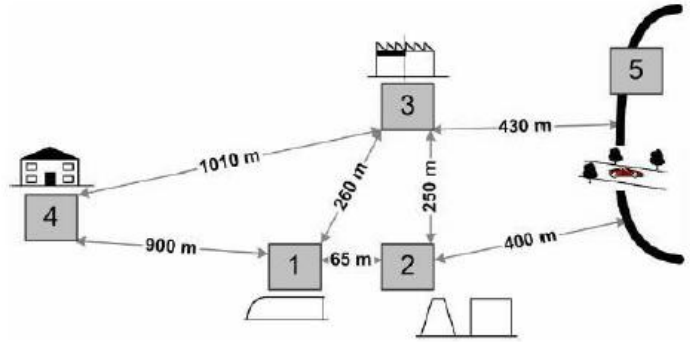
# PRESENTATION OVERVIEW

1. Background Recap – Why the FDESLT?
2. Phase 1 Recap – Where were we in 2024?
3. Updated Roadmap and Current State of Play
4. Phase 2 / 2A Delivery – Current FDESLT Capability Demo
5. Future Capability Targets & Stakeholder Engagement

# FDESLT BACKGROUND – A RECAP

## Why the FDESLT?

- DOS Identified requirement for a EO safety software tool
- ‘Field Deployable’: rapid + automated EO siting and licensing
- Examples of requirements:
  - Enable rapid assessments of magazine siting in theatre
  - Different functionality for different users
  - DPN compatible, windows OS, minimum GPU intensity
  - Incorporate ~~AU (DEOP101)~~ and International (AASTP) standards/best practices




*‘Layout of Example Storage Complex’ from DEOP101 [1]*

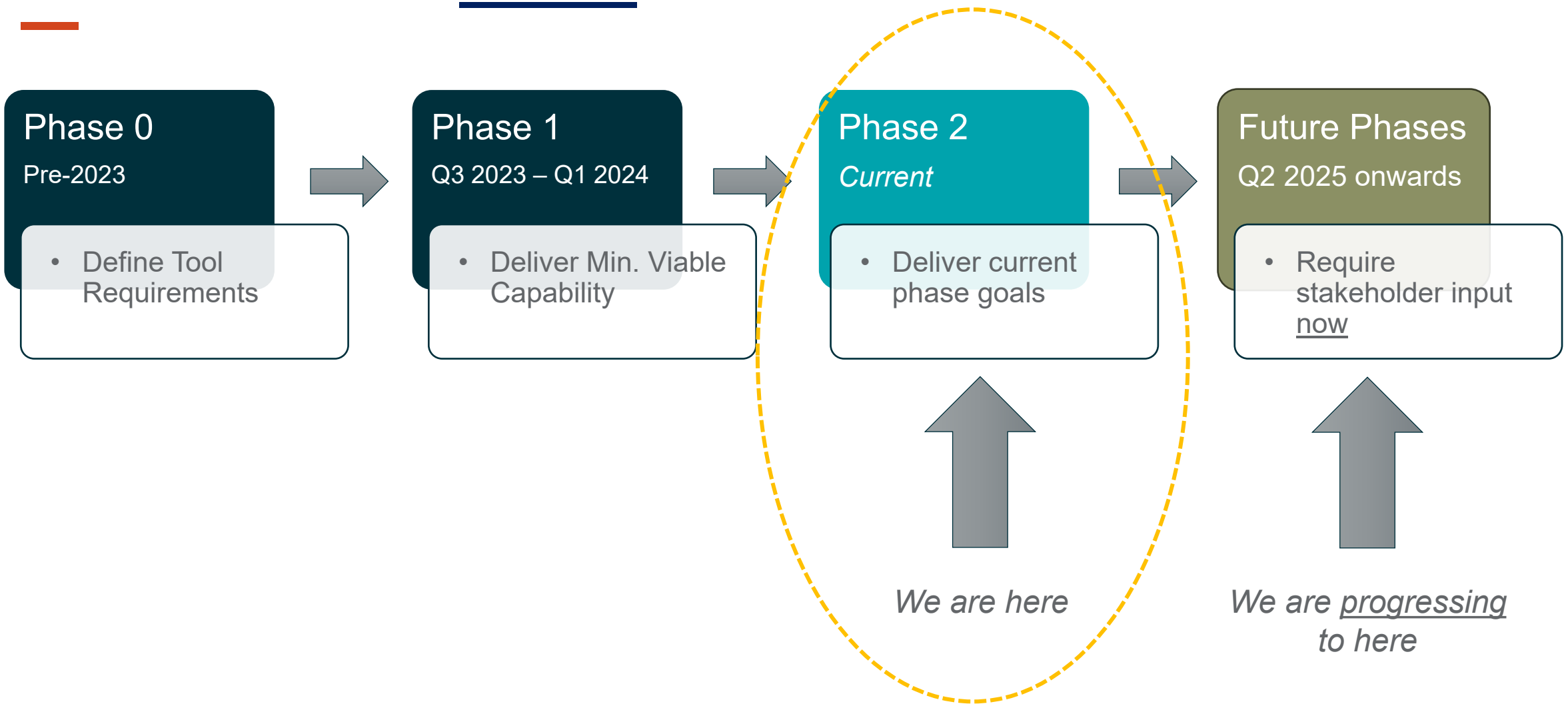



*EO Siting and Licensing Publications – AASTP-1 [2] (left) and DEOP101 [1] (right)*

Thornton Tomasetti

*[1] – DOS, 2024, DEOP 101 – Defence Explosive Ordnance Publication 101.*
*[2] – MSIAC, 2025, AASTP-1 ed. D ver. 1.*

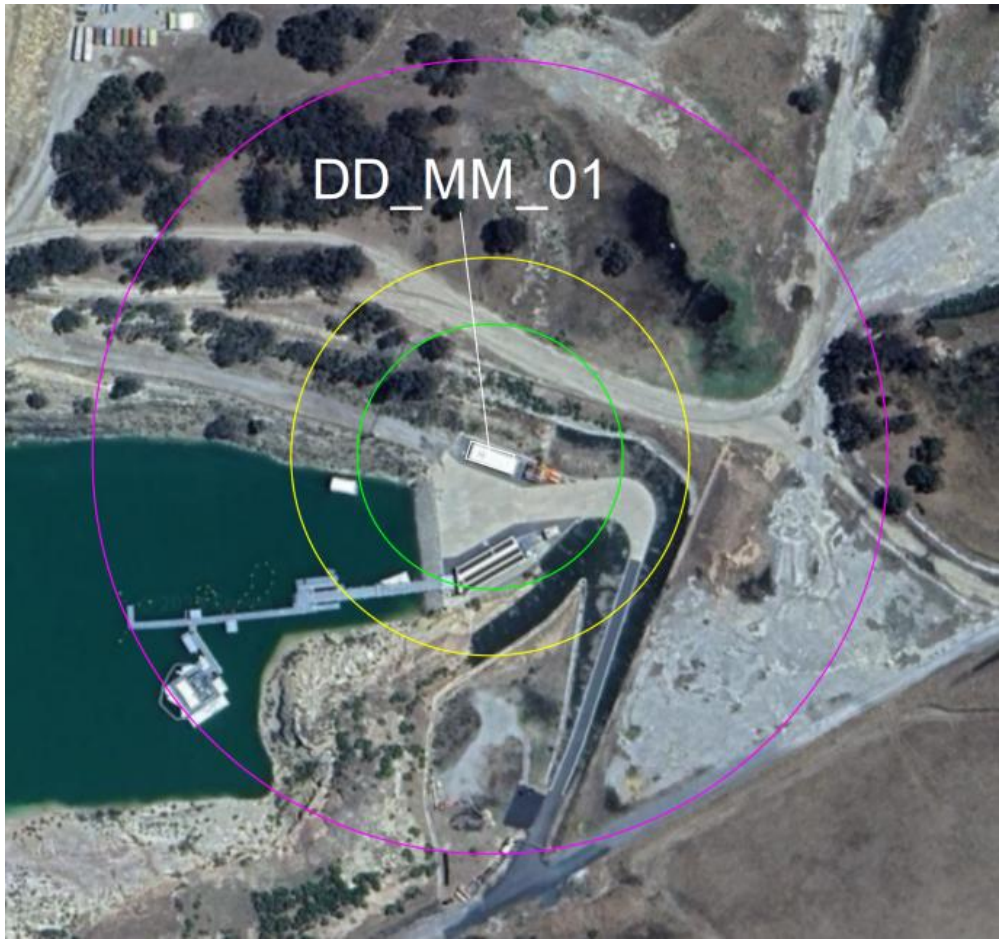
# 2024 – WHERE *WERE* WE THEN?



# PHASE 1 TO PHASE 2 TRANSITION: PHASE 1

## Deliver Minimum Viable Capability

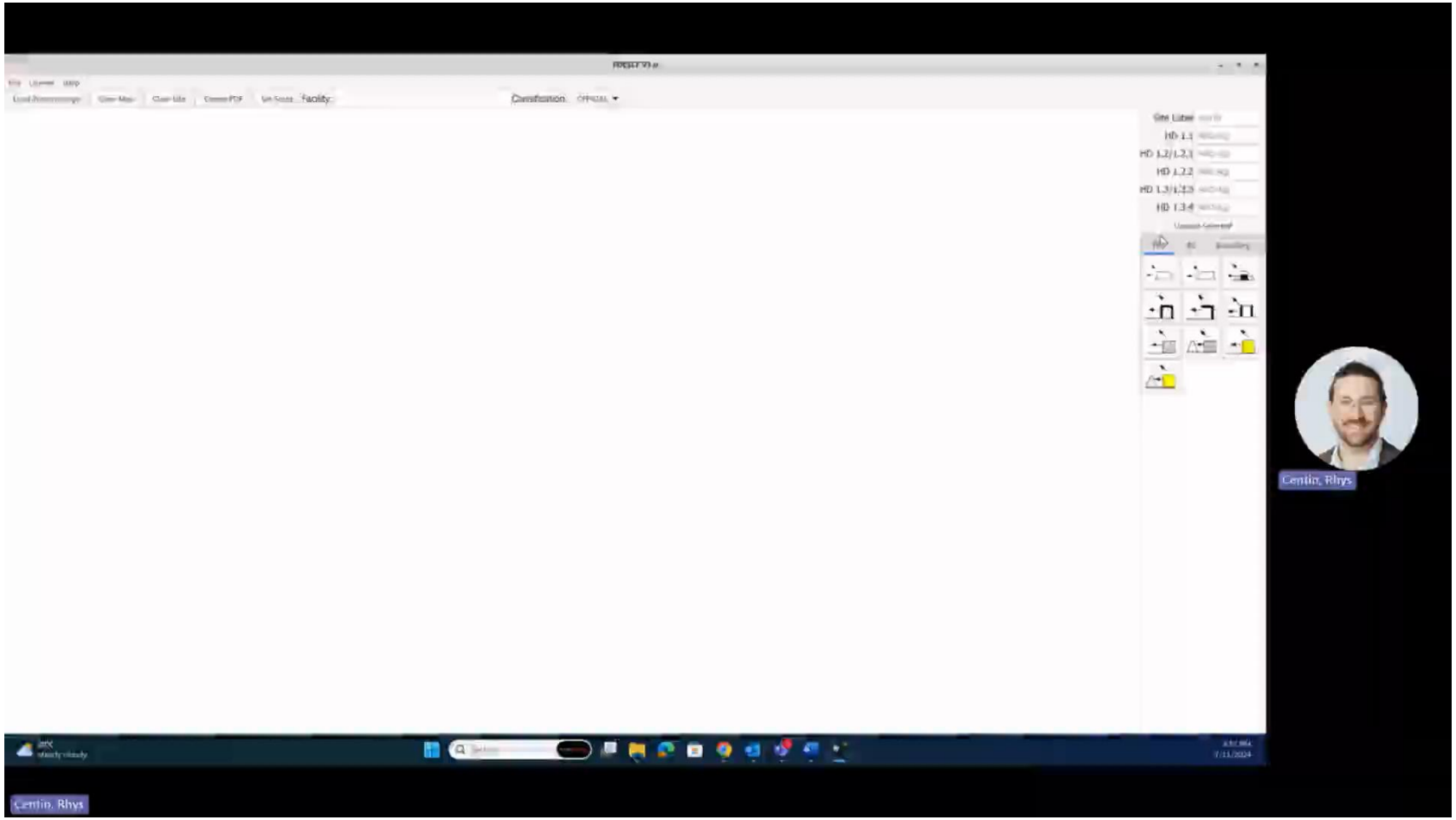
- Load background image (.jpg, .png)
- Produce Safeguarding Radii
- Only Concentric Circles – No ECB function
- Simple Safeguarding .PDF out only




*Safeguarding in Regional VIC, Demo Output from FDESLT*

# PHASE 1 DEMO – PARARI 2024 RECAP

## 2024 Demo Video – Safeguarding at Orchard Hills, NSW



# FDESLT UPDATED TIMELINE

## Phase 1

Q3 2023 – Q1 2024

- Deliver Min. Viable Capability
- Backbone of full capability tool
- Provide Safeguarding output

## Phase 2 / Parari 2024

Q3 2024 – Q4 2025

- Rebuild graphics processing/UI
- Add all QD / FD Equations, Interactions
- ECB style safeguarding arcs
- Incorporate EO risk assessment module

## Phase 2a / Parari 2026

Q1 2026 – Q2 2026

- Dynamic / cascading map updates
- Enhanced barricading functionality
- General ‘tidy up’

## Phase 3

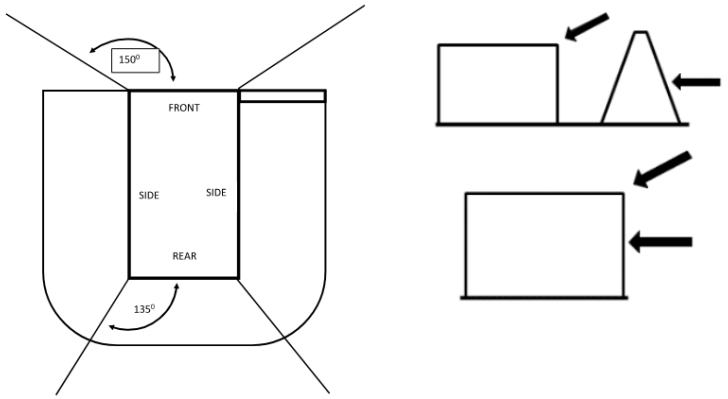
Q1 2027 onwards

- Ongoing requirements definition

# PHASE 2 / 2A – KEY FEATURES

## New Graphics Engine Has Enabled

- Plotting of ECB side, front, rear arcs
- Enabled full suite of QD / FD interactions from ~~DEOP101~~ [1], AASTP-1 [2] (BD, DFD, Progressive, TD) and AASTP-5 [3]
- Dynamic detection of stand-off distances (PES-ES)
- Allow users to define barricaded – unbarricaded entities and interactions
- EO Risk Assessment module, for when QD cannot be met. (*Not shown for time)



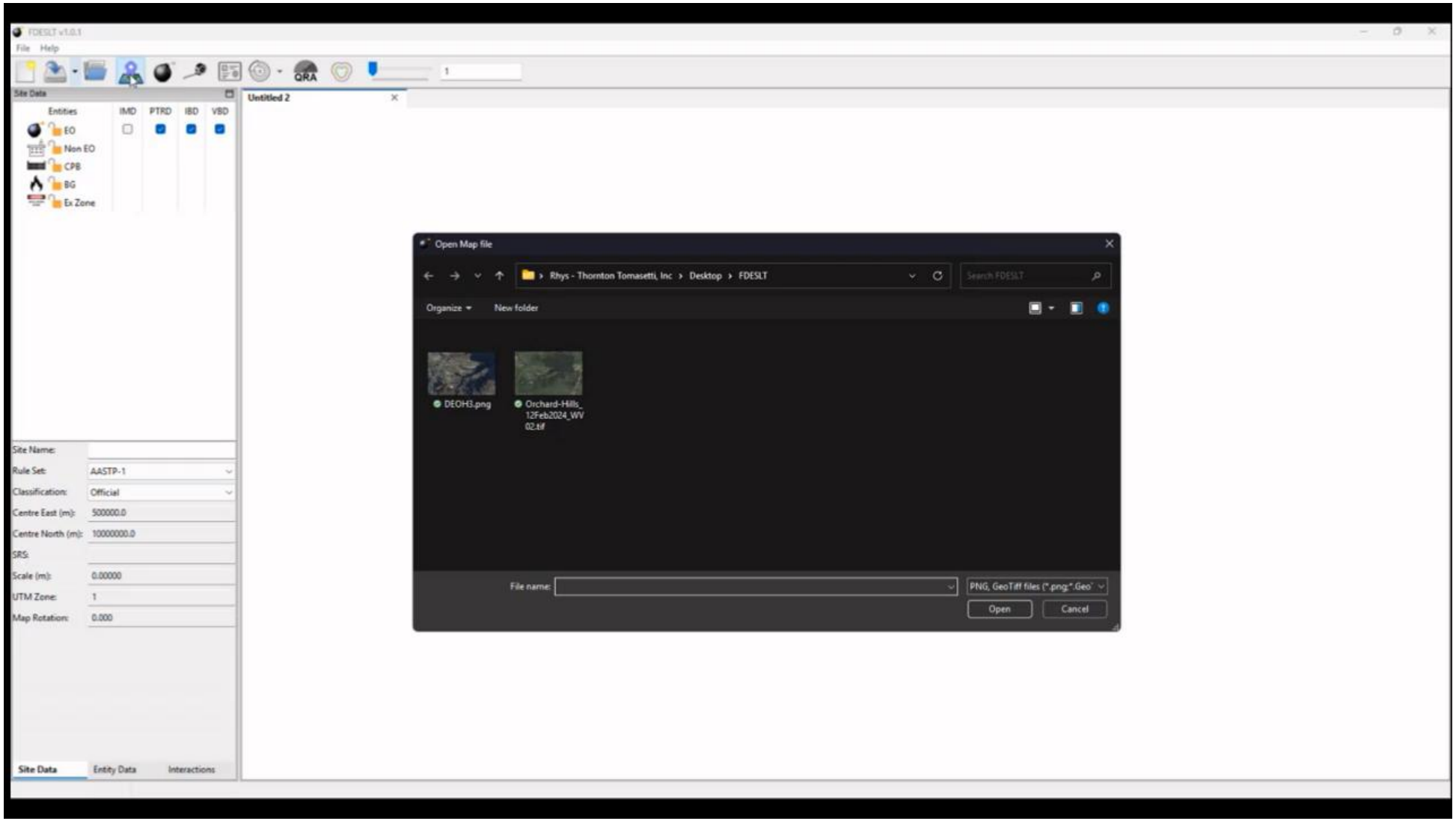

*Excerpts from AASTP-1 [2]*

*Table 1 – Earth Covered Magazine from AASTP-1 [2]*

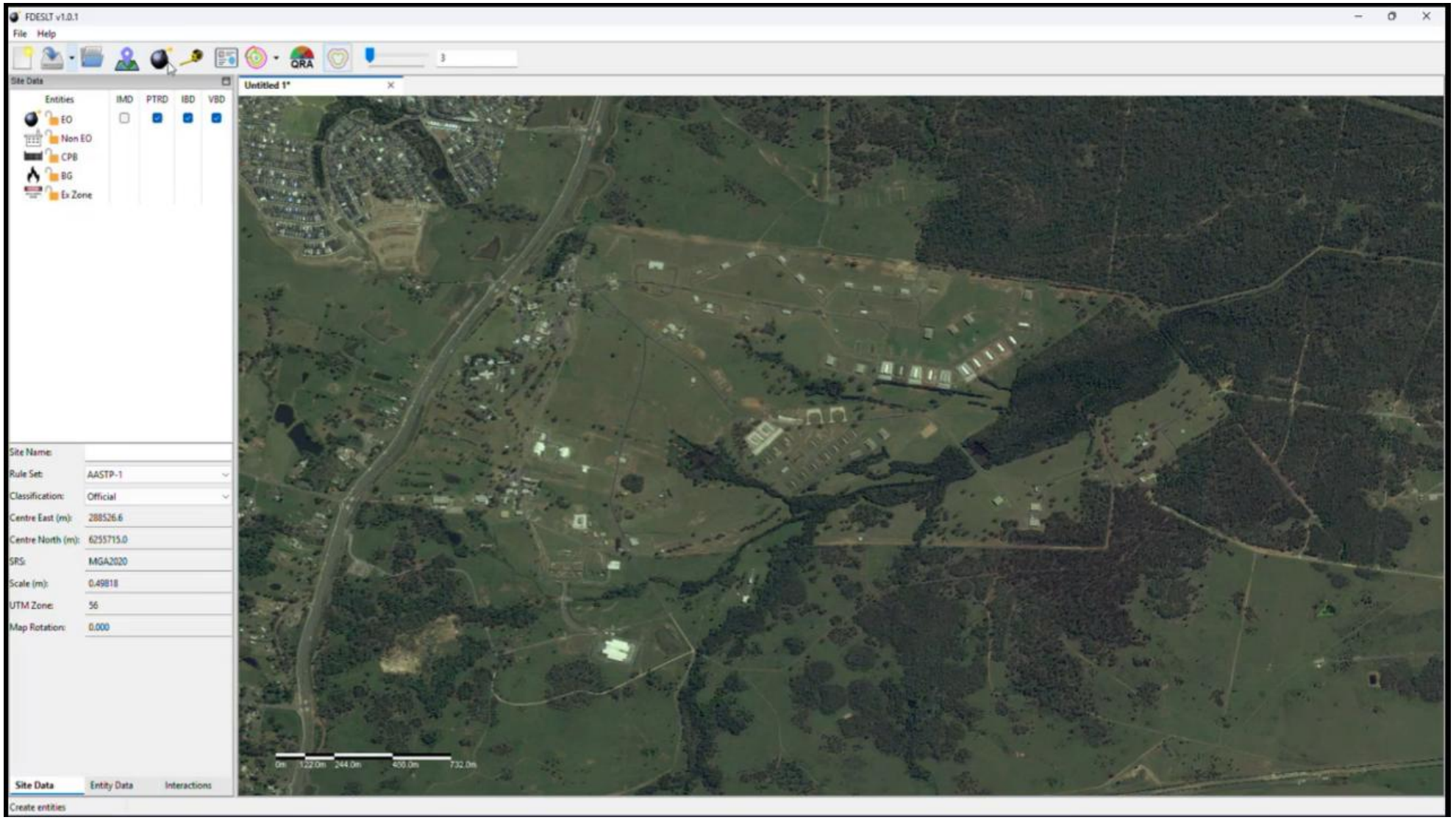
| PES → / E S ↓ | EFFECT | Earth covered magazine. Directional effects through the door and headwall are away from an Exposed Site. (a) | Earth covered magazine. Directional effects through the door and headwall are perpendicular to the direction of an ES. (b) | Earth covered magazine. Directional effects through the door and headwall are towards an Exposed Site (c) |
|---|---|---|---|---|
| 1 Standard NATO ECM, designed for 7 bar in accordance with Part 2, with the door facing away from PES | BLAST | BD3 Virtually complete protection 1.3.3.5 No primary explosives | BD3 Virtually complete protection 1.3.3.5 No primary explosives | BD4 Virtually complete protection 1.3.3.5 No primary explosives |
| | DEBRIS & FRAG | | | |
| | PROG' 1.2.1 | Not applicable (see 1.3.1.11) | Not applicable (see 1.3.1.11) | Not applicable (see 1.3.1.11) |
| | PROG' 1.2.2 | Not applicable (see 1.3.1.11) | Not applicable (see 1.3.1.11) | Not applicable (see 1.3.1.11) |
| | THERMAL 1.3.1 | No QD Virtually Complete Protection | No QD Virtually Complete Protection | 25m Virtually Complete Protection 10m High degree of protection |
| | THERMAL 1.3.2 | No QD Virtually Complete Protection | No QD Virtually Complete Protection | No QD Virtually Complete Protection |


*[1] – DOS, 2024, DEOP 101 – Defence Explosive Ordnance Publication 101.*
*[2] – MSIAC, 2025, AASTP-1 ed. D ver. 1.*
*[3] – MSIAC, 2016, AASTP-5 ed. 1 ver. 3.*

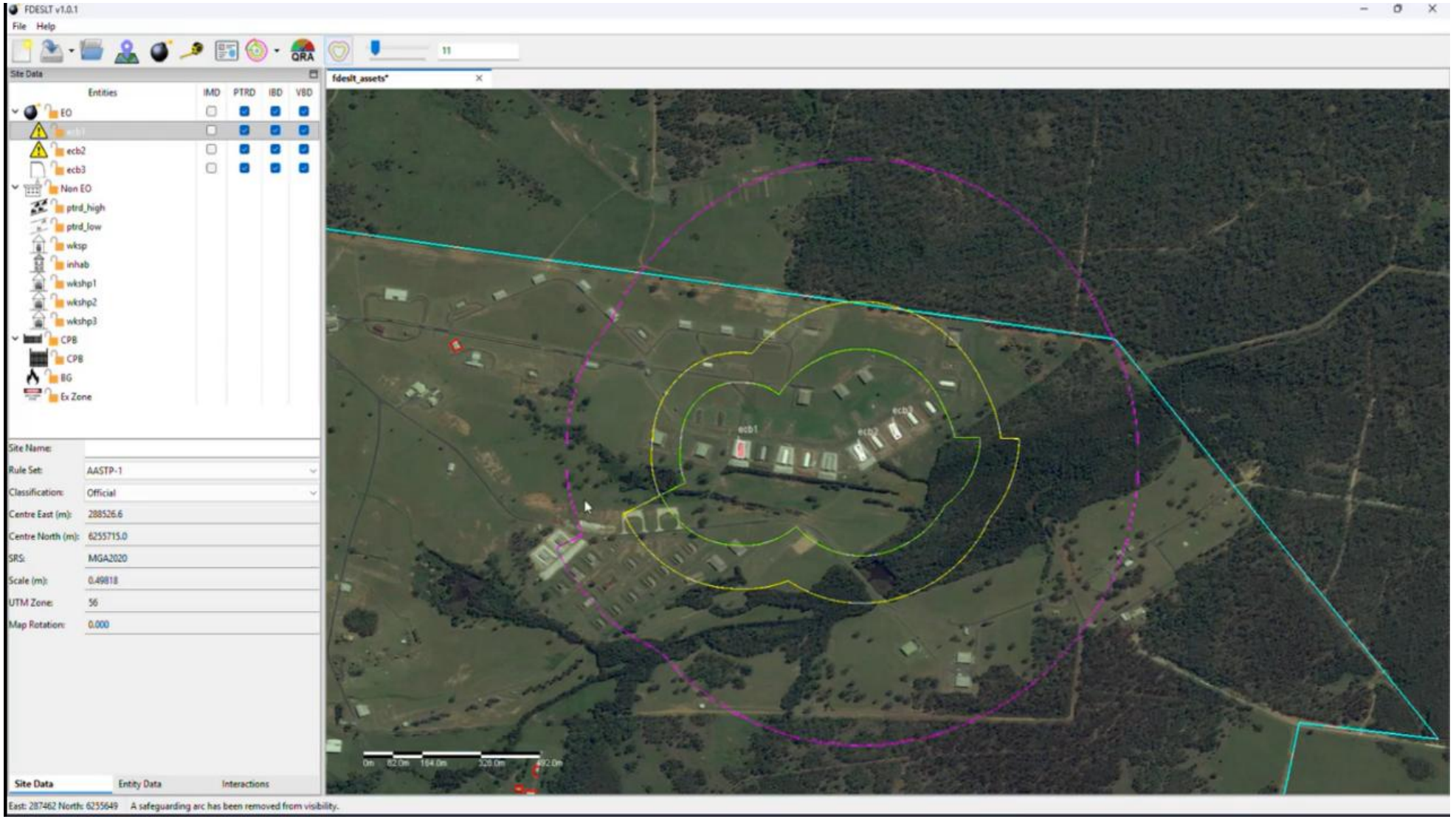
# PHASE 2 / 2A – RASTER FUNCTIONS



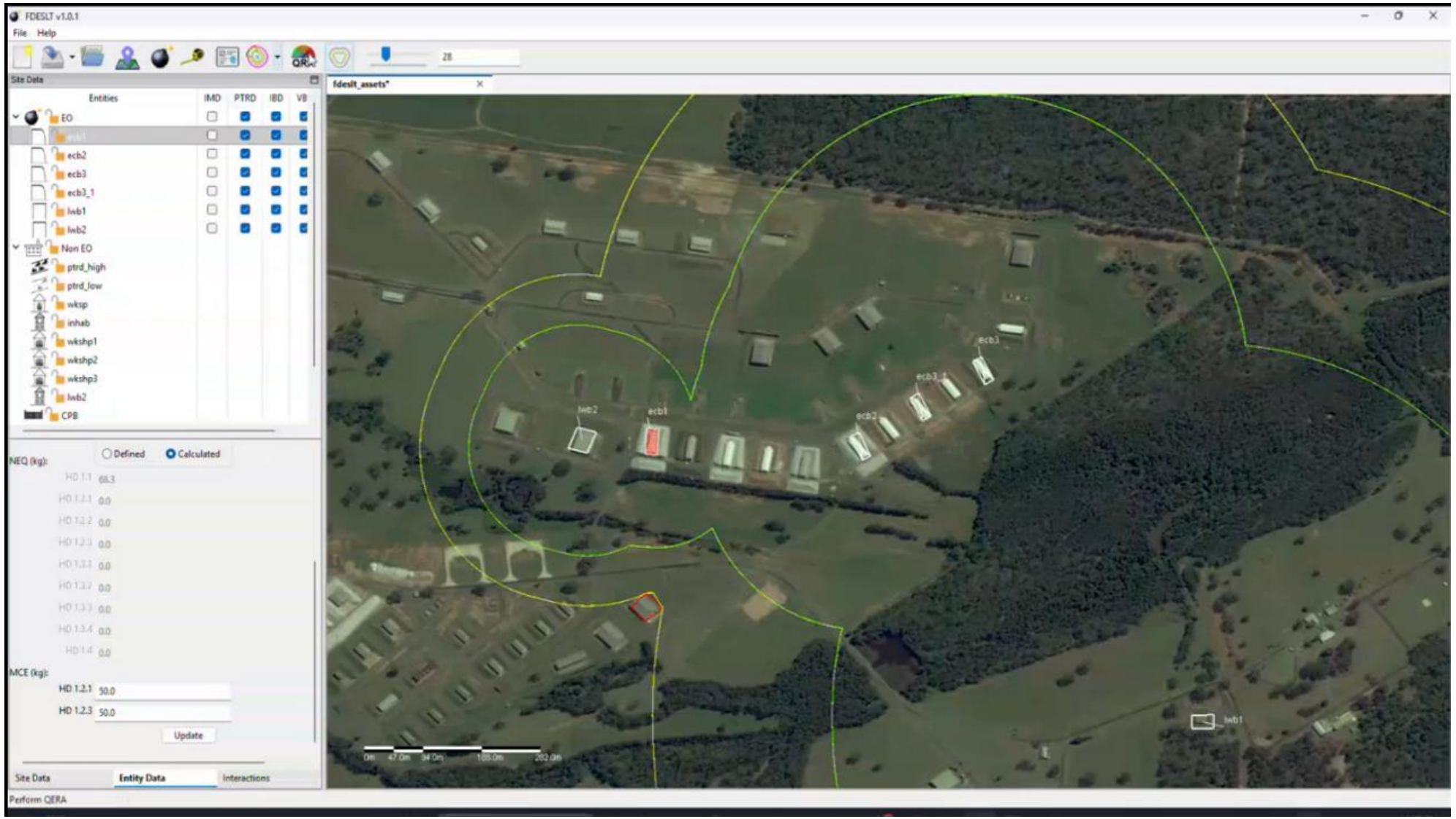
# PHASE 2 / 2A – ENTITY CREATION



# PHASE 2 / 2A – ENTITY MODIFICATIONS



# PHASE 2 / 2A – ARTEFACT GENERATION



# FDESLT TIMELINE REMINDER

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Q1 2027 onwards

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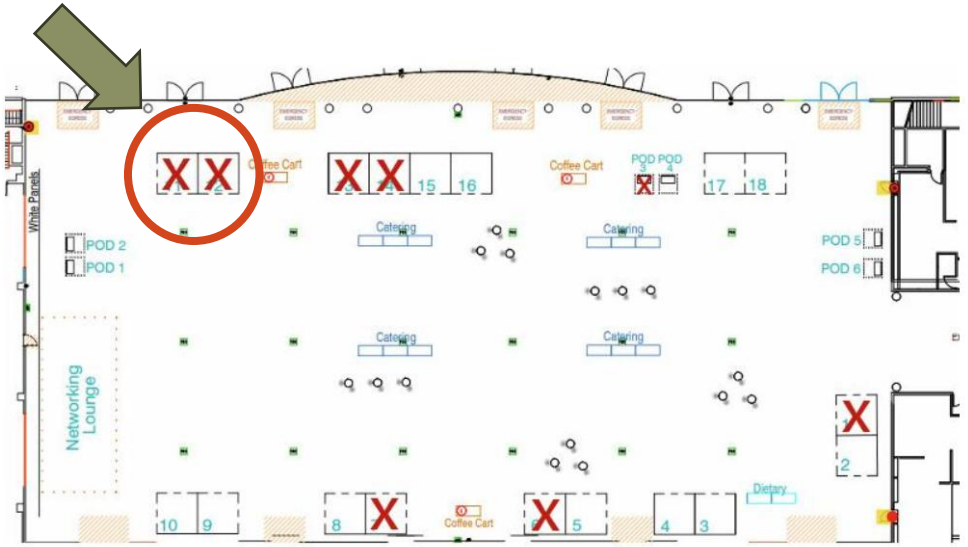
*We are here*

# FUTURE PHASE INPUT

- Require engagement to define direction of software
- Wider consultation with EO stakeholder community:
  - Software Users
  - Policy Setters
  - Safety Regulators
  - Etc.
- If you have an idea, get in touch. AusDefence@ThorntonTomasetti.com
- Come see TT at booth 11 for an FDESLT Demo



*Image taken from consultantsreview.com* [5]






[5] – ConsultantsReview.com

# PHASE 3 – FUTURE DEVELOPMENT

## Likely Key Capability Milestones

- Import Shapefiles containing building data layers
- Plotting and visualisation of consequence arcs from EO Risk Assessment module
- Placement of entities via lat-long coordinates
- Scale and define entities via distance inputs (i.e., length of PTRD, length of building sidewall)
- Interactions Tab – modify which equations are applied from AASTP-1 [2] to PES-ES relationship, ‘remove’ site from requirements set
- Logistics functions – describe PES volume, physical stowage space, configuration management module, etc.



*[2] – MSIAC, 2025, AASTP-1 ed. D ver. 1.*

# REFERENCES


1. Australian Department of Defence – Directorate Ordnance Safety, 2024, DEOP101 – Defence Explosive Ordnance Publication 101.

2. Munitions Safety Information Analysis Centre, 2025. AASTP-1: NATO Guidelines for the Storage of Military Ammunition and Explosives, ed. D ver. 1, NATO Standardization Office, Brussels, Belgium

3. Munitions Safety Information Analysis Centre, 2016. AASTP-5: NATO Guidelines for the Storage, Maintenance and Transport of Ammunition on Deployed Missions or Operations, ed. 1 ver. 3, NATO Standardization Office, Brussels, Belgium

4. ConsultantsReview.Com, 2024. accessed from: https://www.consultantsreview.com/news/what-is-the-importance-of-having-a-business-consultant-nwid-1065.html#google_vignette on 18OCT2024

# THANK YOU



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