MD-Wall & Pavement

RCS test Report Overview

- MD's new product (the Moshon Village) simulates a small village made completely out of soft materials.

- This helps engineers safely test ADAS and autonomous equipped vehicles

- Materials are picked to help make the village "vehicle sensor aware"

- Each component that makes up the village (Such as the Wall's and Pavement's) are tested using a production standard radar during development to replicate their real-world equivalent.

- Our aim is for each surrogate target we make to be a true representation of its real counterpart.

- Tested for Radar Signature

- Temporary 'real wall' constructed by a local builder in our test area

- MD Obstruction wall made from graded density foam material.

- Test area clear of obstacles and as used by ADAS test engineers

- Various tests conducted - Foil backed, no foil and pedestrians behind.

  – *Foil lining a wall is 'typical' of a new wall build in the UK*

"Imparting Knowledge"

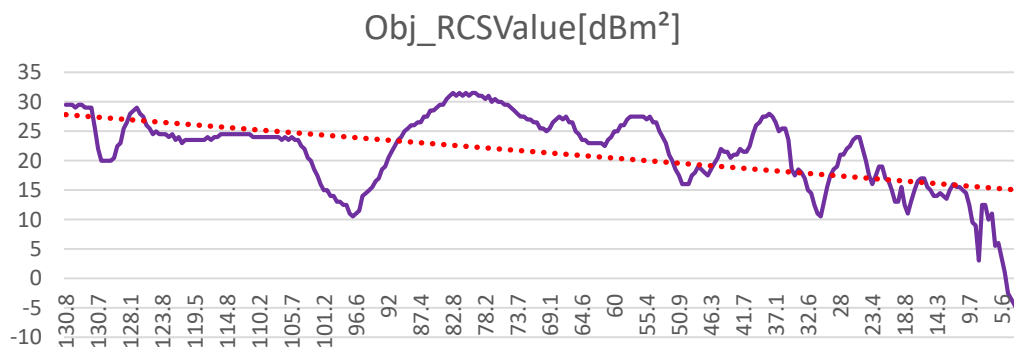# RCS analysis of a wall - Conclusion

- **Analysis**:
  - The Real block wall **WITH** a foil lining reproduces a similar radar signature to the MD obstruction foam wall **WITHOUT** a foil lining.
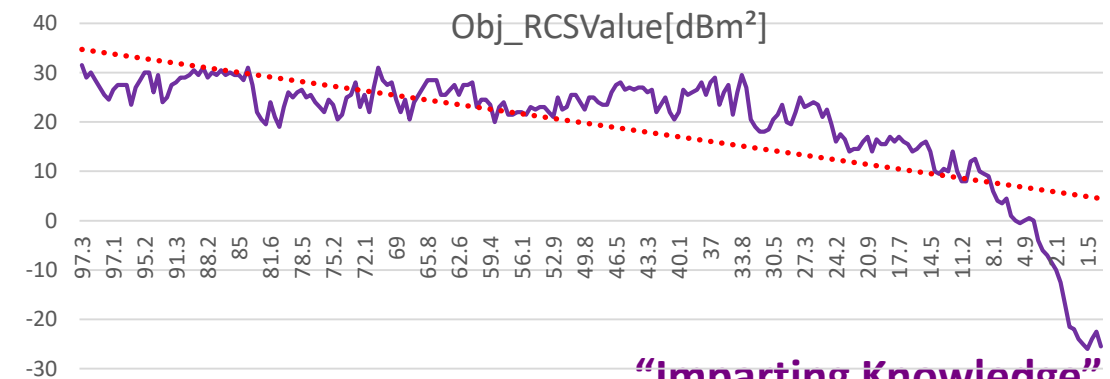

- **Real Wall (Foil lining)**

Static 17.31 dBm2 at 30 m – (Linear 19.63)

- **MD-Wall (Foam - no foil lining)**

Static 13.20 dBm2 at 30 m (Linear 19.63)

Obj_RCSValue[dBm²]
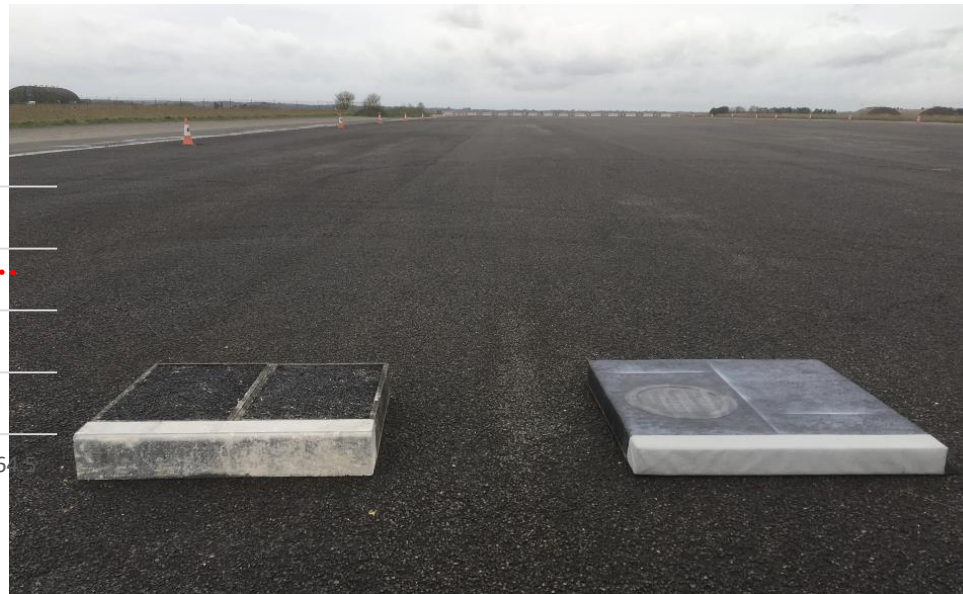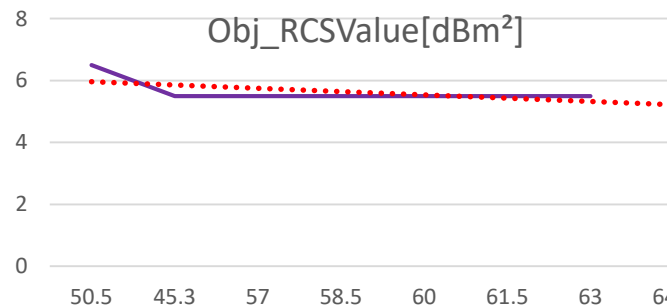

Obj_RCSValue[dBm²]

"imparting Knowledge"

- Tested for Radar Signature

RCS analysis of a kerb - Conclusion

- **Analysis**:
  - Not an easy signature to work with, but a similar result was achieved.

- **Real Pavement section**
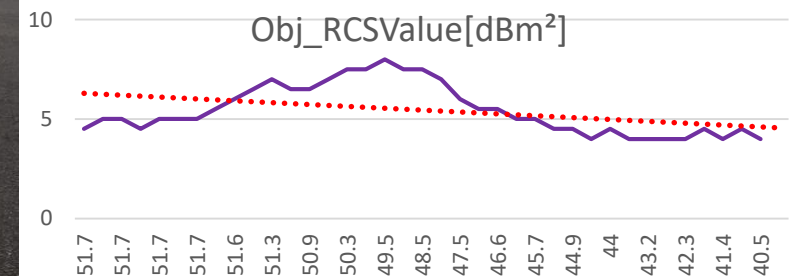
  5.75   dBm2

- **Foam Pavement Section**

  5.43   dBm2

- Further comparisons made for radar RCS signatures
- Same approach used for all our targets.

Thank-you!