

Case Study

Desliming Module Replacement

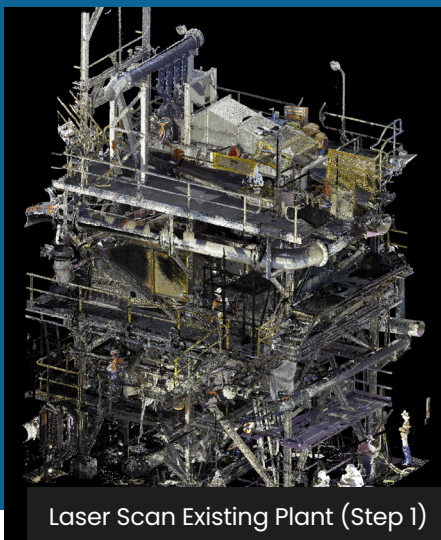
AE Young Engineers was engaged by a Bowen Basin mining company to provide engineering services for the replacement of a CHPP desliming module. The existing plant module, approximately 15 years old, had reached the end of its useful life.

Working closely with the CHPP owner, fabrication contractors, and installation teams, AE Young Engineers developed a modified replacement module.

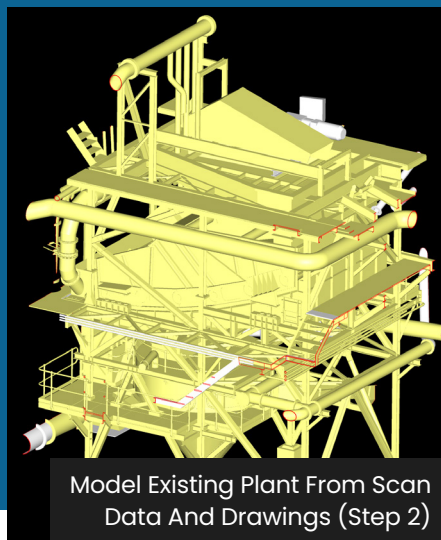
The project involved replacing or modifying key process equipment, including

- **Desliming sump**
- **DMC feed wing tank**
- **Desliming banana screen**
- **Desliming screen underpan**
- **Desliming screen feed sluice box**
- **Plant feed conveyor drive and head chute**

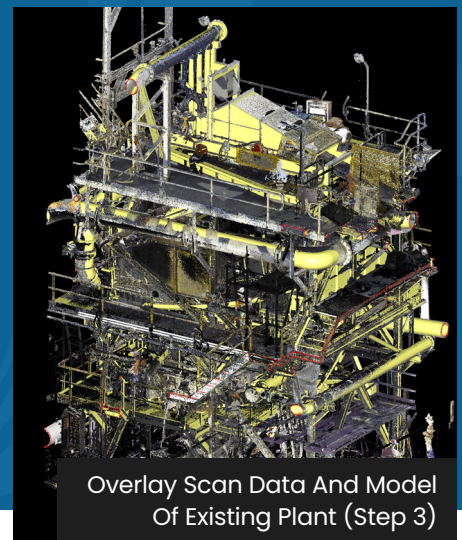
In addition, all supporting structural steel was either replaced or modified to suit the upgraded design.



Laser Scan Existing Plant (Step 1)



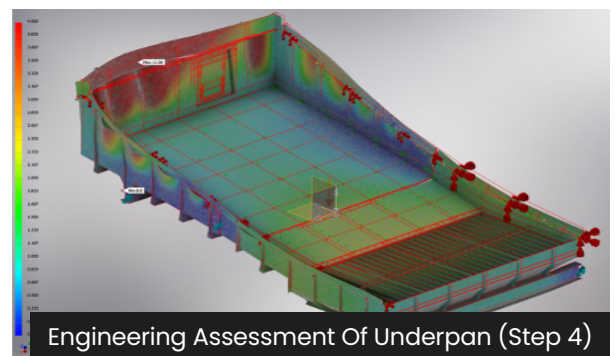
Model Existing Plant From Scan Data And Drawings (Step 2)



Overlay Scan Data And Model Of Existing Plant (Step 3)

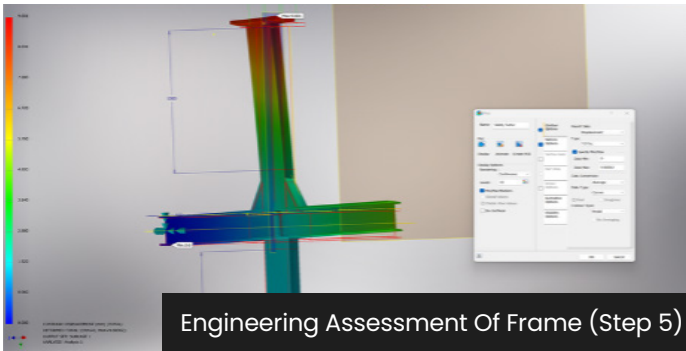
The Following Engineering Services Were Provided by AE Young Engineers:

- **Site inspection and laser scanning** of the existing plant module to capture as-built conditions.
- **3D modelling** of the existing structure and equipment to aid design and planning.
- **Engineering assessment** of the replacement structure and process equipment.
- **Development of deconstruction and installation methodology** to ensure safe and efficient execution.
- **Crane and lifting plan development** for the installation of heavy components.
- **Project engineering support and quality assurance** throughout fabrication and installation.

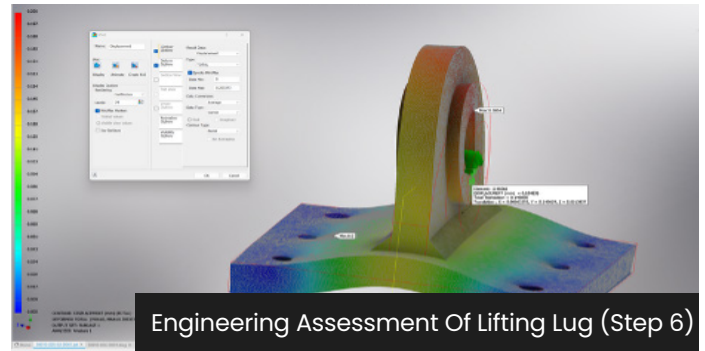


Engineering Assessment Of Underpan (Step 4)

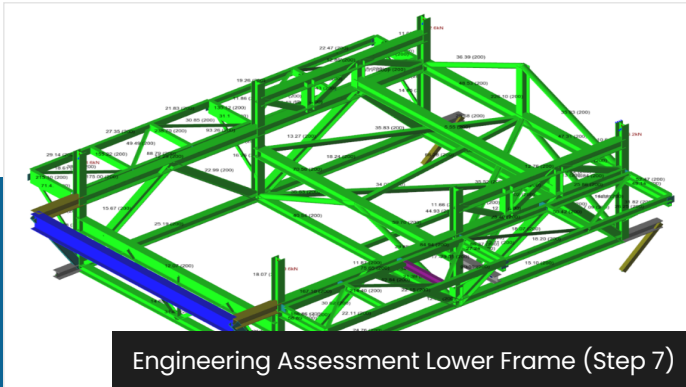
By leveraging advanced scanning, modeling, and engineering expertise, AE Young Engineers successfully delivered a streamlined, efficient, and safe module replacement, ensuring continued plant operation with minimal disruption.



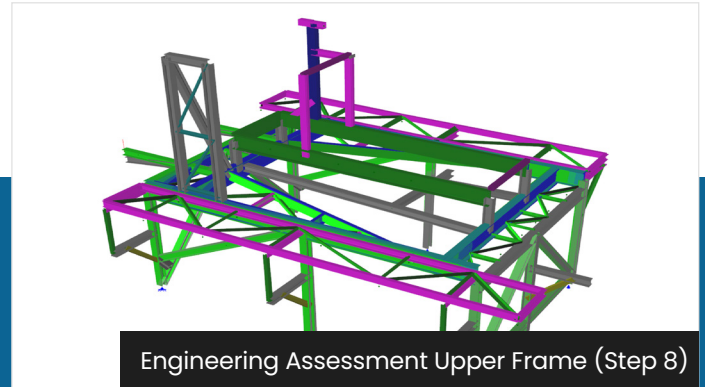
Engineering Assessment Of Frame (Step 5)



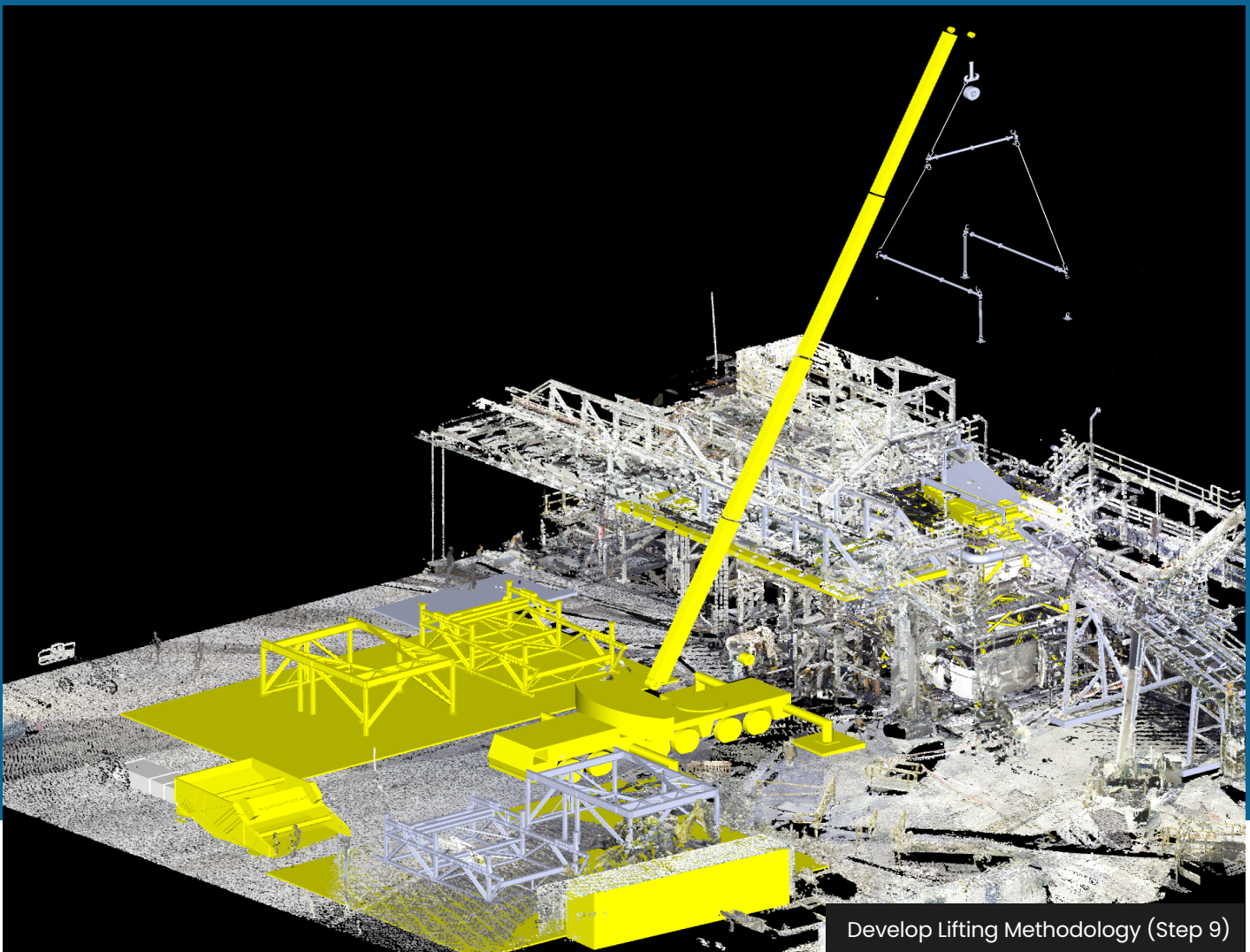
Engineering Assessment Of Lifting Lug (Step 6)



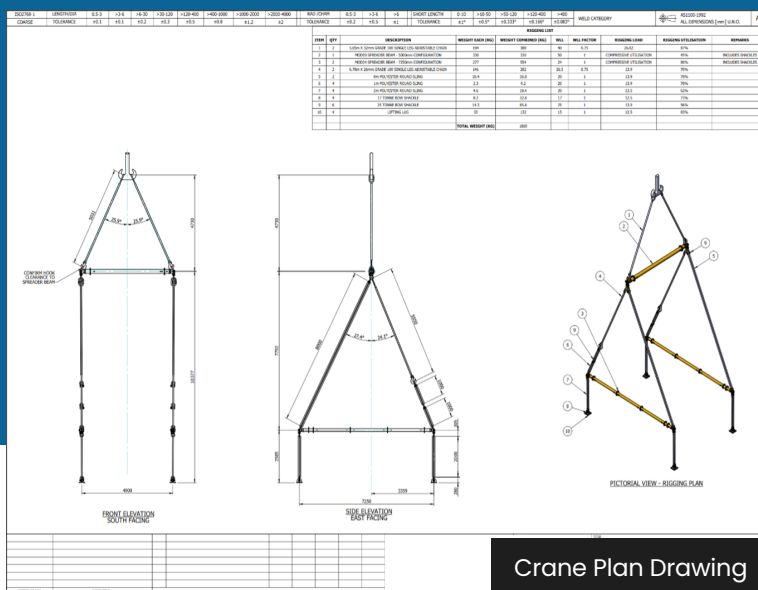
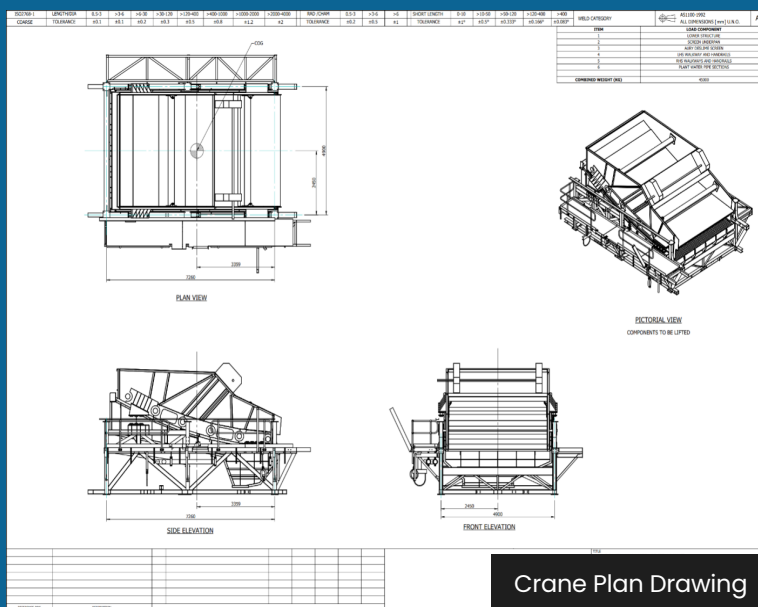
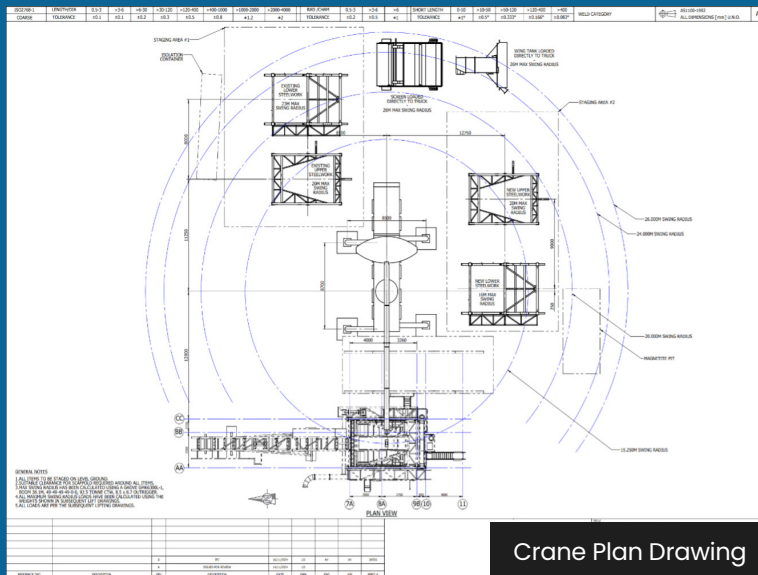
Engineering Assessment Lower Frame (Step 7)



Engineering Assessment Upper Frame (Step 8)

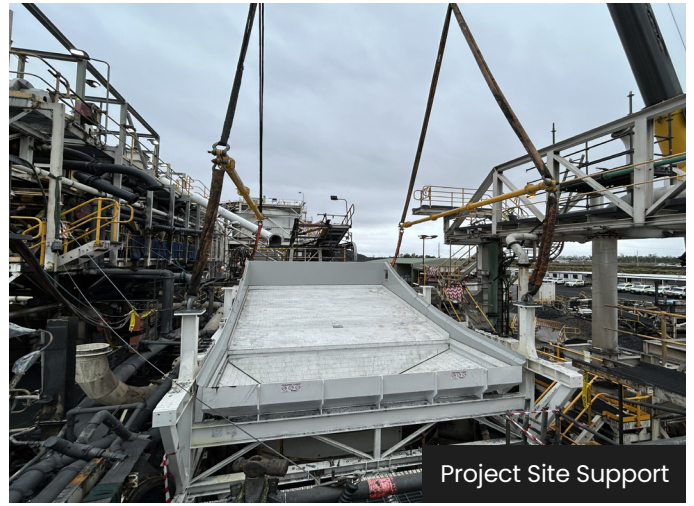


Develop Lifting Methodology (Step 9)





Project Site Support



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Project Site Support



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