



Project Experience Example Pluvial Model for a New Oil Terminal, Azerbaijan

Client	Water Resources Associates, on behalf of KBR
Location	Qobustan, Azerbaijan
Duration	2019-2020
Value of Opportunity	£26,500 ex VAT
Key Persons	Mark Cramman, Rhys Coombs

Software Used

QGIS
MIKE by DHI
CCH developed tools
Python
Microsoft Office

CCH Hardware Used

32C CPU x1
128GB RAM
Turing GPU x1
Volta GPU x2
Pascal GPU x1

Data Produced

1.5TB Hydraulic Data
60GB GIS Data

Description of Job

CC Hydrodynamics Ltd were engaged by Water Resources Associates on behalf of KBR to undertake detailed pluvial modelling of a complex new oil terminal being constructed on the shore of the Caspian Sea, near to Qobustan, Azerbaijan.

CCH undertook a site reconnaissance visit to determine the likely impact of flooding on the area, including looking for ephemeral outflows, observing the general geotechnical and geological conditions and looking for man made features that might exacerbate flooding around the terminal and nearby settlement of Shikhlar.

A detailed hydrodynamic pluvial model was constructed using MIKE21FM and this was used to assess the performance of the proposed terminal drainage system and to see whether the terminal would be negatively impacted from surface flows nearby. The sands in the area were particularly difficult to model since these would presumably have a very high infiltration rate. This was managed with MIKE21FM using the infiltration module and internally developed CCH tools.

The outcome of the project was the establishment of an outline design for perimeter drain channels and an infiltration area which would prevent flooding on the newly proposed terminal plateau.

As part of the work CCH delivered an interactive web map of the results.

For more information:

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