



DEC

Environmental Contractor

WEDA

Dredging Summit & Expo 2014

June 15-18, 2014

Toronto, Canada

Soil Washing Treatment of Dredged Sediments at the Port of Pescara

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Location of the Site

July 13th
2014 !!!!





Location of the Site





The port of Pescara



DEME: creating land for the future

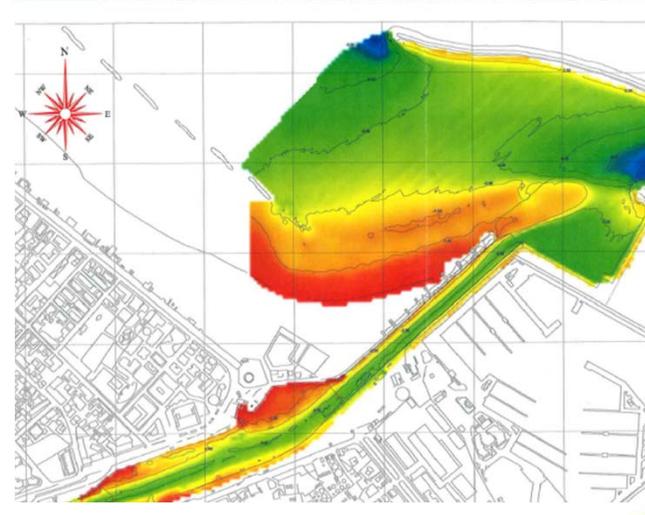


The port of Pescara





The siltation problem at Pescara



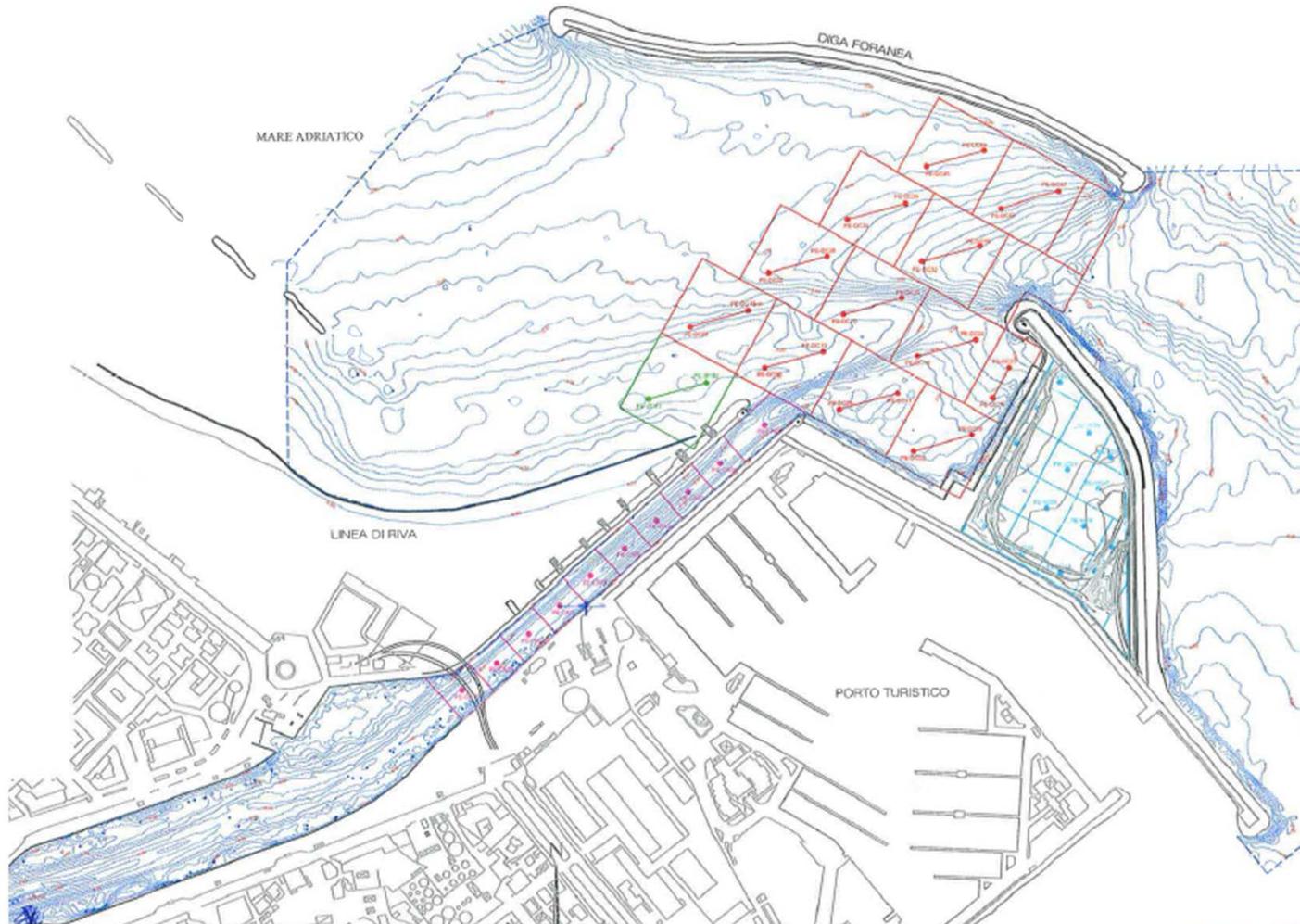


Fishermen protests





Sampling of the sediments





Contaminants of concern

- PAH
- TPH
- PCB
- Metals: Hg, Cu, Zn
- DDT



Areas to be dredged





Pilot project February 2011

Scope of Works

- Dredging of some areas of Darsena Commerciale.
- Treatment of 2000 m³ sediment (20% sand, 80% fines) with Adapted Soil Washing Plant
- Slightly high values of HC, presence of microbiology
- Reuse of filter cakes: limited values of Chlorides and COD

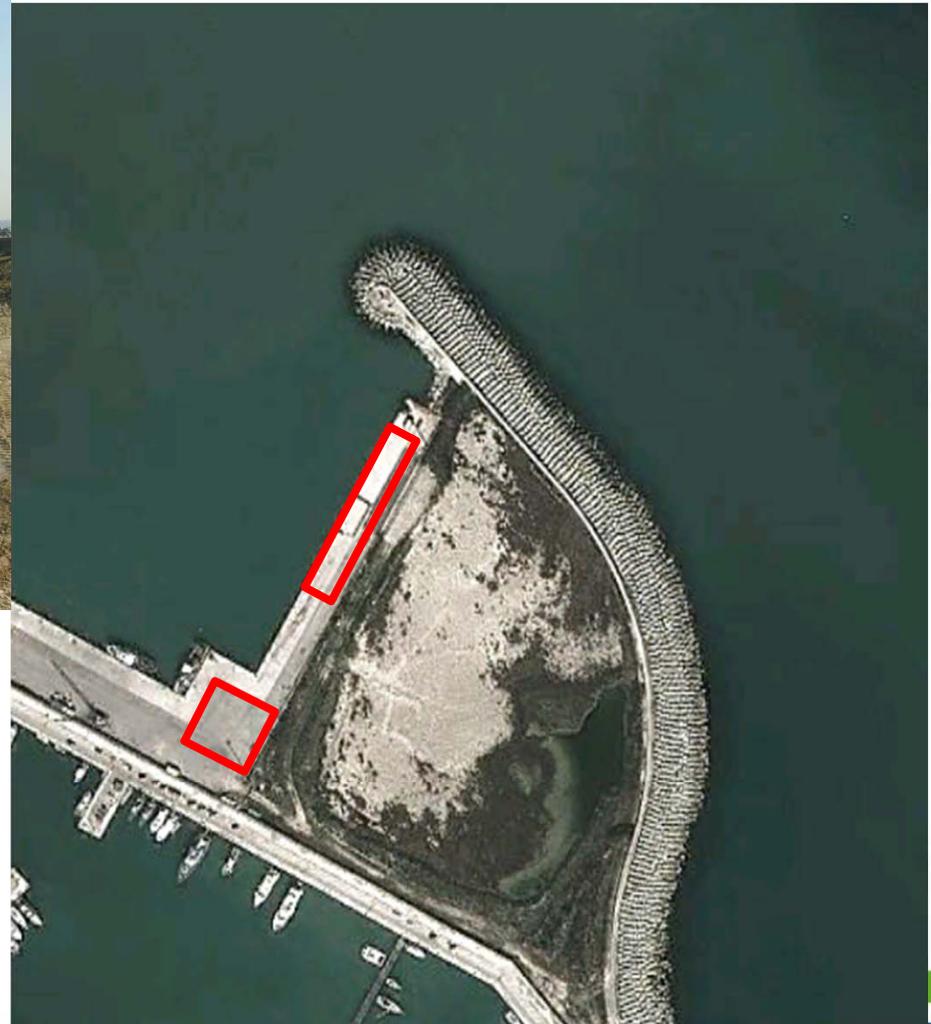


LEGEND:

1. Dredging Area (green)
2. Existing Storage Pool (black)
3. Soil Washing Plant Area (red)



Site setup



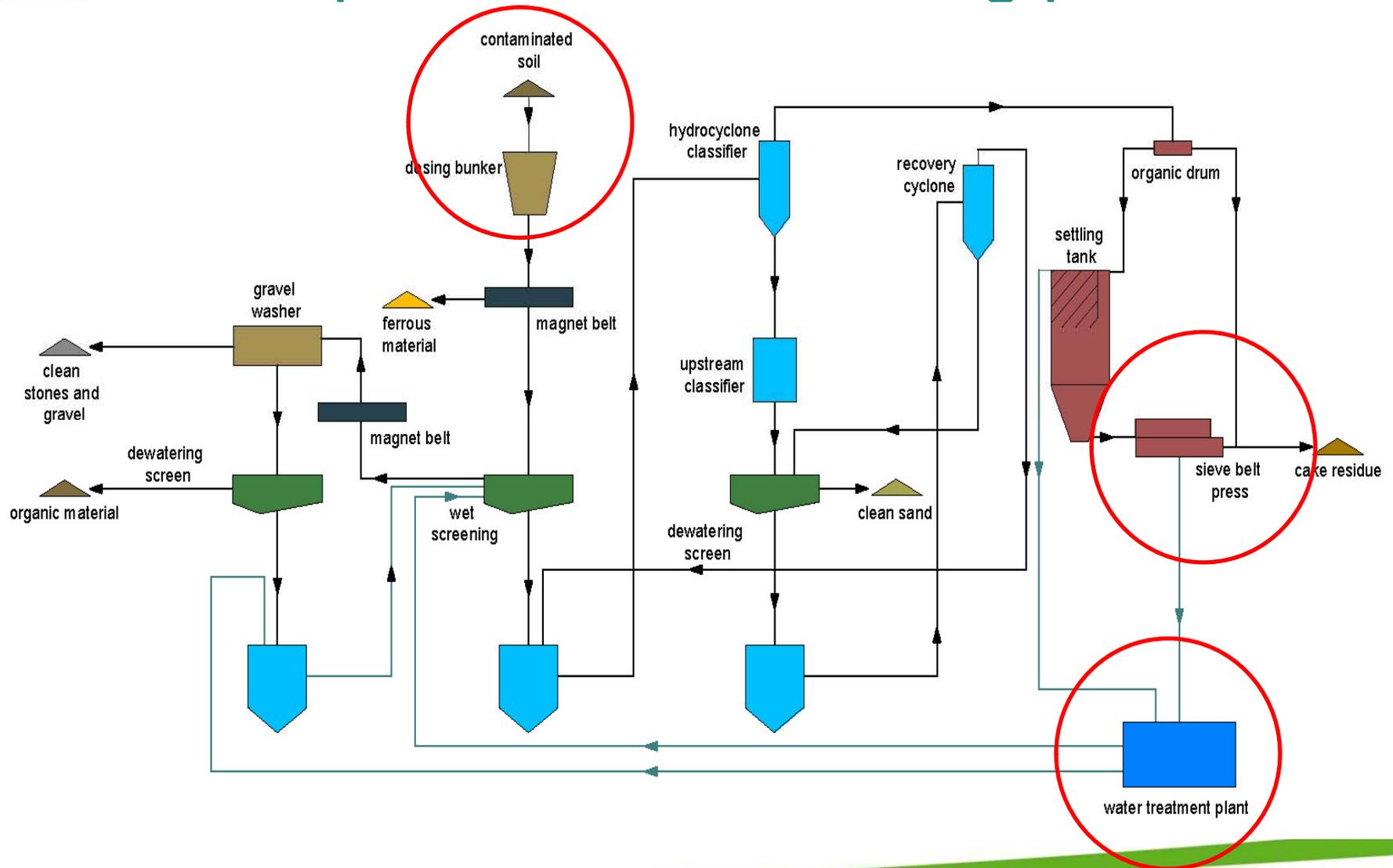


Soil wash plant





Adaptations soil washing plant





Objectives pilot trial

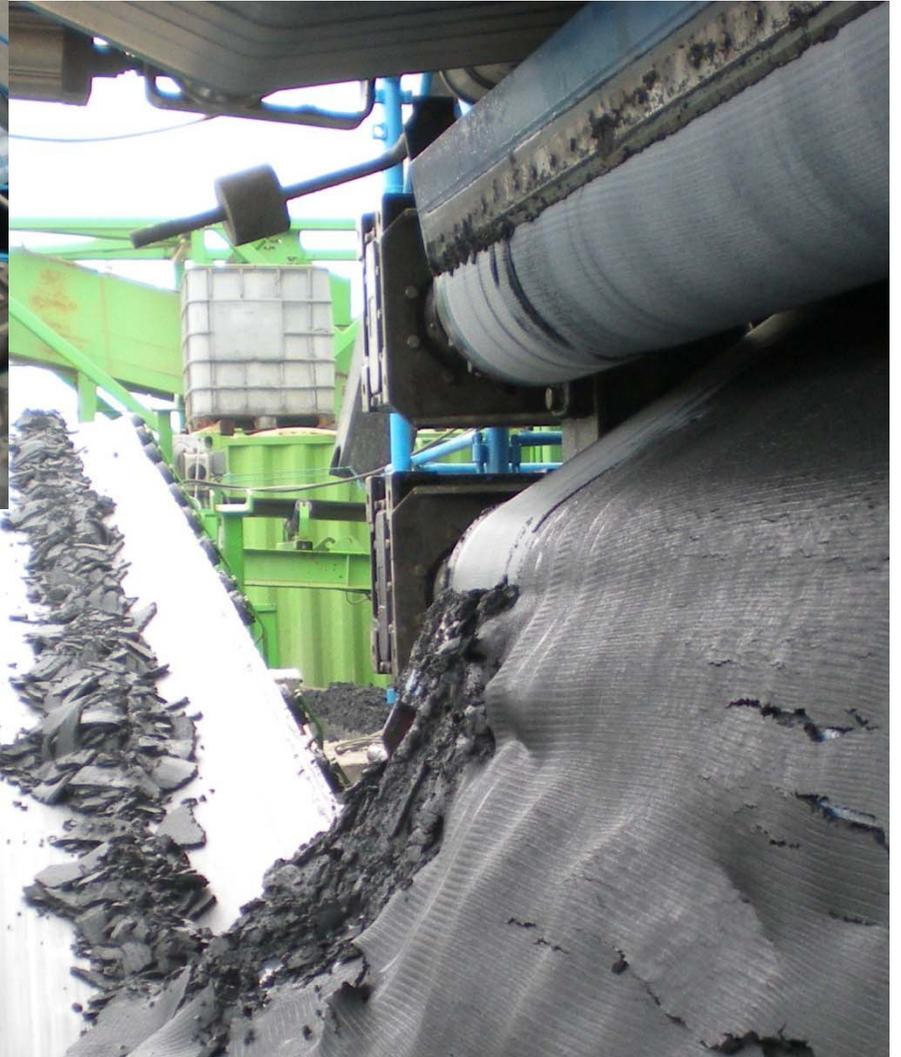
- Treat 2000 m³ (20 % sand): capacity ?
- Produce sand for beach nourishment:
 - < 10 % fines (< 63 µm)
 - COC < LCB
 - TPH < 100 mg/kg DM
 - DDT < 1 µg/kg DM
- Produce filter cakes
 - DMC as high as possible
 - Low leachability:
 - chlorides < 100 mg/l
 - COD < 30 mg/l











DEME: creating land for the future



Lessons learned pilot trial

- Throughput plant: 35 tons/hour
- Sand OK but process needs adaptations:
 - Hydrocyclone adjustment
 - Upstream classifier adjustment
- Filter cake OK:
 - but chlorides have to be washed by refreshing of process water
 - DMC = 60 %



Upstream classifier

- Automated discharge valves
- Repositioning density sensors
- Water flow increased





Full scale project Summer 2013

Scope of Works

- Dredging of Canale and Darsena Commerciale: 200000 m³
- Treatment of 20000 m³ sediment from Darsena Commerciale South: 80 % sand !





Full scale project Summer 2013



Cobra

Fioravante





Full scale project Summer 2013

- Client



Ministry of Infrastructures and Transports –
Abruzzo e Sardegna

- Contractor



SIDRA

Dredging, Marine
& Environmental Contractor

- Subcontractor



DEC

Environmental Contractor





Full scale project Summer 2013

- Project finished in three months: production 500 tons/day
- All sand was used for beach nourishment
- Filter cakes to CDF
- Various similar projects around Italy





Conclusions



**KEEP
CALM
AND
SUPPORT
THE RED DEVILS**