

ROCK ARMOUR



SAVING HOMES AND COMMUNITIES FROM THE FORCE OF THE NORTH SEA

CASE STUDY

CROMER AND MUNDESLEY, NORFOLK

CROMER AND MUNDESLEY REQUIRED IMMEDIATE SERVICING TO THEIR FAST ERODING SHORELINES TO SAVE HOMES AND COMMUNITIES FROM THE FORCE OF THE NORTH SEA.

Aggregate Industries supplied Rock Armour, transporting approximately 1,000 tonnes of aggregates to the beach twice a day.

THE BRIEF

The East coast of England is one of the fastest eroding shorelines in Europe, with homes and communities already suffering the consequences of the relentless force of the North Sea. To protect the region and its sandy cliffs, North Norfolk Council recently announced its Cromer and Mundesley Coastal Management Schemes which will see 70,000 tonnes of aggregates laid across the shoreline.

THE SOLUTION

Contractor Balfour Beatty partnered with leading construction materials supplier, Aggregate Industries, to specify its Rock Armour aggregate utilised in a mix of three to six tonne, 300kg to one tonne and 15-30kg, to negate the accelerating coastal erosion most effectively.

Selected for its unique logistical capabilities, Aggregate Industries supplied the Rock Armour stone from its flagship quarry in Glensanda, Scotland. The product was then shipped down to the East Coast where the boat will anchor at sea, with a smaller barge transporting approximately 1,000 tonnes of aggregates to the beach twice a day at high tide.

Nick Gilbert, Business Development Manager at Aggregate Industries commented:

"AS SOON AS WE WERE APPROACHED TO BE INVOLVED IN THIS SCHEME, WE KNEW OUR ROCK ARMOUR AND LOGISTICAL SOLUTIONS WOULD PERFECTLY FIT THE BILL.

THE EAST OF ENGLAND LACKS THE NATURAL HARDSTONE QUARRIES THAT CAN PRODUCE THE NECESSARY SIZE AND QUANTITY OF ROCK REQUIRED FOR THIS PROJECT. ADDED TO THAT, THE ROAD TRANSPORT LINKS ARE NOT IDEAL GIVEN THE IMPRESSIVE CLIFFS THAT RUN ALONG THE COAST. OUR ABILITY TO ANCHOR A BOAT AT SEA AND DELIVER AGGREGATES BY BARGE IS IDEAL FOR COASTAL MANAGEMENT PROJECTS AND WILL ALSO MINIMISE DISRUPTION TO THE SURROUNDING COMMUNITIES.

A LOT OF THOUGHT AND PLANNING HAS GONE INTO THE ROUTE AND ANCHORING FOR THIS PROJECT, BEARING IN MIND THE FISHING AND CRABBING INDUSTRY IN THIS PART OF THE COUNTRY, AS WELL AS SERVICE LINES THAT RUN UNDER THE SEABED."

The Cromer and Mundesley Coastal Management Schemes have received £25 million in funding from the Environment Agency, North Norfolk Council, Anglian Water and Mundesley Parish Council, with the project expected to take 12-18 months to complete.

The Mundesley shoreline was undertaken first and covered 2km in total, with approximately 900 metres of rock to the west and repair works to groynes, navigation aids and additional sea wall protection.

Phase 2 of the Cromer Coastal Management Scheme will be delivered approximately 12 weeks later. This will include approximately 300 metres of rock revetment west of the pier and repair works to groynes, navigation aids and additional sea wall protection.

A spokesperson for Balfour Beatty adds:

"COASTAL EROSION IS A VERY REAL THREAT, AND THE GROWING IMPACTS OF CLIMATE CHANGE ARE BECOMING ALL THE MORE EVIDENT ON OUR PICTURESQUE BRITISH COASTLINES. WORKING WITH NORTH NORFOLK COUNCIL ON THE CROMER AND MUNDESLEY SCHEMES, WE UNDERSTOOD THE VITAL IMPORTANCE OF PROTECTING BOTH OF THESE SHORELINES AND THUS A HARD WEARING AND RELIABLE PRODUCT WAS ESSENTIAL.

LOGISTICALLY THIS PROJECT PRESENTED A CHALLENGE IN THE LACK OF ROAD NETWORK AVAILABLE, BUT AGGREGATE INDUSTRIES' CAPABILITY OF DELIVERING THE ROCK BY SEA WAS REALLY GROUNDBREAKING FOR THIS PROJECT AND ENABLED IT TO RUN SMOOTHLY AND ON-TIME."



