The Mulberries Witham

Case Study

Project Overview

Blue Phoenix is supplying 10,000 tonnes of **Reborn** Aggregates Type 1 to Anderson Group for Section 278 works at a prominent Redrow Homes development. Blue Phoenix worked closely with the contractor and Essex Highways to secure formal approval for the material's use in adoptable roads.

Client/contractor	M. Anderson Construction Ltd.
Approving authority	Essex Highways
Material supplied	10,000 tonnes of Type 1
Application	Type 1 Road Sub-base
Location	Witham, Essex
Compliance	Fully compliant with National Highways specifications

> Whilst its environmental credentials align extremely well with MACL's core values and approach to sustainability, its performance properties are also outstanding. Since re-integrating the product in sub-base construction following local Highway approval, we have not seen a single PSD (grading) fail and CBR results are also exceptional. The product being completely uniform tonne after tonne makes laying and compaction straightforward, maximising production levels.

Jack Pannell, Procurement Manager at M. Anderson Construction Ltd.





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Environmental Impact

The table compares **Reborn** Aggregates with primary aggregates for the sub-base of this project, covering material, transport and CO_2.

Criteria	Reborn Aggregates	Primary Aggregates
Compacted Density	1.7 Mg/m^3	2.2 Mg/m^3
Tonnage Required	10,000 t	12,000 t
Truck Journeys Required	527	632
Total CO_2 Generated	29,334 kg (2.93 kg/t)	96,261 kg (8.02 kg/t)
Material Cost	Most-effective vs quarried	Higher unit cost per tonne

Key savings vs primary:

66,927 kg
CO_2 saved (5.09 kg/t)

12,000 t
primary resources saved

Assumptions: Distance from Primary Quarry (Tilbury Dock Depot, Mibau Stema UK Ltd) to site is 33 miles
Trucks are assumed to be 100% Laden and only counted one way.
Average MPG for Rigid Trucks is 8.2.
IBAA 0.29 kg CO_2/t is specific to the activities & processes at the Tilbury Depot

Outcome

This project shows how collaboration between the supplier, contractor and Essex Highways can secure approval for secondary aggregates in adoptable road sub-bases.



Blue Phoenix

Reborn Aggregates