THE LIME CENTRE

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MORTAR DISAGGREGATION REPORT

DATE
16/01/2018

SITE
Climping Mill, Climping Street, Climping, BN17 5RN

CLIENT
Amervale Ltd, Todhurst Farmhouse, Lake Lane, Barnham, West Sussex, PO22 0AL

LOCATION / FUNCTION IN BUILDING
Mortar Sample 2
The Cottage

1.0 SUMMARY

The sample is a medium strength, pale yellow mortar.

The sample is made up of approximately 1 part binder and other calcareous material to 3.18 parts aggregate by weight. The aggregate is made up of yellow sand graded from 0 to 5mm with the addition of coal and stone particles up to 10mm

A compatible repair mortar can be made with a site mix of sand and lime using a mix of 1 part St Astier NHL3.5 to 2.5 parts 5mm sand. *

A mix of 1 part St Astier NHL3.5 and 2 ½ parts Morestead 5mm is a near match to the sample in colour texture and strength. Coal and stone pieces can be added to the mortar mix to match the sample.

An alternative durable and compatible mortar can be made using a pre-blended pigmented mix with St Astier NHL3.5 ref. NM CG BATH.

NB This Disagregation Report can apply to the Mill House, wall to west side and to Mill Thatch subject to the points below:
Sand should be graded from 0 - 2.55mm for brickwork and evenly graded to avoid more fines than coarse.
No marine sand as to much salt content.
DGC (Historic Buildings) Consultants LTD
Noted added 03.10.2018

2.0 FINDINGS

2.1 DISAGGREGATION ANALYSIS

The sample was separated from the aggregate by dissolution in hydrochloric acid and the relative proportion of sand was determined. The sand makes up 76% by weight.

2.2 DISAGGREGATION SAMPLE

A. DRY WEIGHT OF SAMPLE: 46.22g

B. DRY WEIGHT OF SAND/AGGREGATE: 34.26g

C. DRY WEIGHT OF LIME AND CALCAREOUS MATERIAL (less 10% CO2): 10.76g

D. PERCENTAGE SAND/AGGREGATE BY WEIGHT 76%

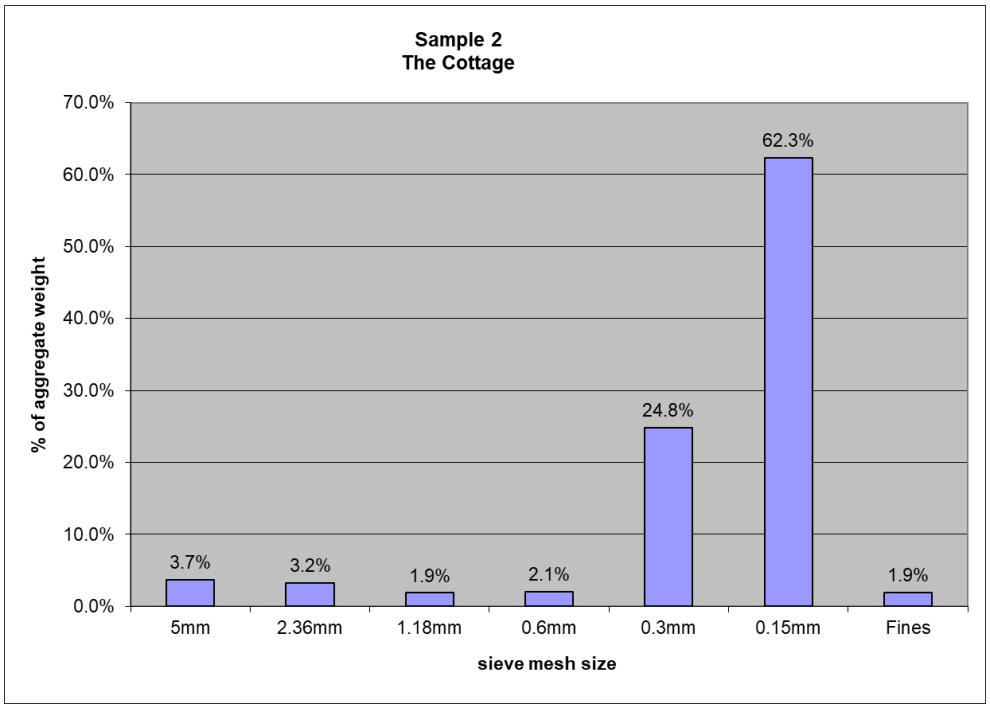
E. PERCENTAGE LIME AND CALCAREOUS MATERIAL BY WEIGHT: 24%

F. RATIO LIME AND CALCAREOUS MATERIAL TO SAND/AGGREGATE BY WEIGHT: 1 : 3.18

2.3 THE AGGREGATE GRANULOMETRY AND GRADING

The aggregate is made up of sand graded from 0 to 5mm.

Sample 2 The Cottage		
BS Sieve	**Aggregate Weight Retained (g)**	**% Aggregate Weight**
5.00mm	1.25	3.68%
2.36mm	1.10	3.23%
1.18mm	0.64	1.88%
0.60mm	0.71	2.09%
0.30mm	8.45	24.85%
0.15mm	21.20	62.33%
Fines	0.66	1.94%



The Lime Centre stocks a range of local aggregates. These are used for aggregate matching and in various proportions for colour matching The following grading system is used: close match, near match, some variation, no match.

Pre- mixed pigmented mortars are available in a range of colours and gradings: <u>Sand gradings</u> SG0-1mm, RG0-2mm, CG0-3mm.
<u>Strengths</u> Medium NHL3.5, Strong NHL5
When sourcing your aggregates attention should be paid to colour, texture, particle size and grading.
<u>NOTE:</u> The proportions given above relate to the sample. The report is not intended as a repair specification. A repair specification should take into account the original mortar along with site conditions, exposure, function of mortar, seasonal working etc.