

E10 IN SITU CONCRETE

15 SPECIFICATION

Concrete generally: To BS 8500-2.

Exchange of information: Provide concrete producer with information required by BS 8500-1, clauses 4 and 5.

20 DESIGNED CONCRETE for Slipway and wall
Designation: C35/45. Fibres: Not required.

Aggregates:

Size (maximum) : 20 mm.

Coarse recycled aggregates: not permitted.

Cement type CEM I, SRP C, IIA, IIB-S

Min Cement Content 320kg/m3

Max W/C ratio) 0.5

(To suit exposure class XS3 Tidal Seawater)

45 PROPERTIES OF FRESH CONCRETE

Adjustments to suit construction process: Determine with concrete producer. Maintain conformity to the specification.

50 PREMATURE WATER LOSS

Requirement: Prevent water loss from concrete laid on absorbent substrates.

Underlay: Polyethylene sheet 250 micrometres thick.

Installation: Lap edges 150 mm.

60 PLACING AND COMPACTING

Surfaces to receive concrete: Clean, with no debris, lying wire clippings, fastenings or free water.

Timing: Place as soon as practicable after mixing and while sufficiently plastic for full compaction.

Temperature limitations for concrete: 30°C (maximum) and 5°C minimum) . Do not place against frozen or frost covered surfaces.

Compaction: Fully compact to full depth to remove entrapped air especially around reinforcement, cast-in accessories, into corners of formwork and at joints. Continue until all bubbles cease to appear on the top surface.

Methods of compaction: To suit consistence class and use of concrete.

70 CURING AND PROTECTING

Evaporation from surfaces of concrete: Prevent throughout curing period.

Surfaces covered by formwork: Retain formwork in position and, where necessary to satisfy curing period, cover surfaces immediately after striking.

Top surfaces: Cover immediately after placing and compacting. Replace cover immediately after any finishing operations.

Curing periods:

Surfaces which in the finished building will be exposed to the elements, and wearing surfaces of floors and pavements: 10 days (minimum) .

Other structural concrete surfaces: 5 days (minimum) .
Protection: Protect concrete from shock, indentation and physical damage.

E20 FORMWORK FOR IN SITU CONCRETE

60 BOARD SUBSTRUCTURE FORMWORK

General: Lay tightly butted and fully supported on firm, even substrate. Restrain against movement during concrete placement. Seal joints to prevent penetration of concrete. Collapse boards with cellular cardboard cores: Keep dry. Seal joints in polyethylene underlay/ overlay sheets and reseal cut polyethylene bags.

70 FORMWORK

General: Accurately and robustly constructed to produce finished concrete to the required dimensions.

Formed surfaces: Free from twist and bow with intersections, lines and angles square, plumb and true.

Joints between forms and completed work: Prevent loss of grout and formation of steps.

Holes and chases: Form with inserts or box out as required.

E30 REINFORCEMENT FOR IN SITU CONCRETE

20 RIBBED BAR REINFORCEMENT

Standard: To BS 4449.

Strength grade: B500B.

30 FABRIC REINFORCEMENT

Standard: To BS 4483.

Strength grade: B500B.

40 CONDITION OF REINFORCEMENT

At time of placing concrete: Free from corrosive pitting, loose millscale, loose rust and contaminants which may adversely affect the reinforcement, concrete, or bond between the two.

55 LAPS IN REINFORCEMENT

Laps in bar reinforcement (minimum) : 40 diameters

Laps in fabric reinforcement (minimum) : 400mm.

70 FIXING REINFORCEMENT

Standard: To BS 7973-1 and -2.

Installation: Provide adequate support, tie securely and maintain the specified cover.

Tying wire: 16 gauge black annealed. Prevent intrusion into the concrete cover.

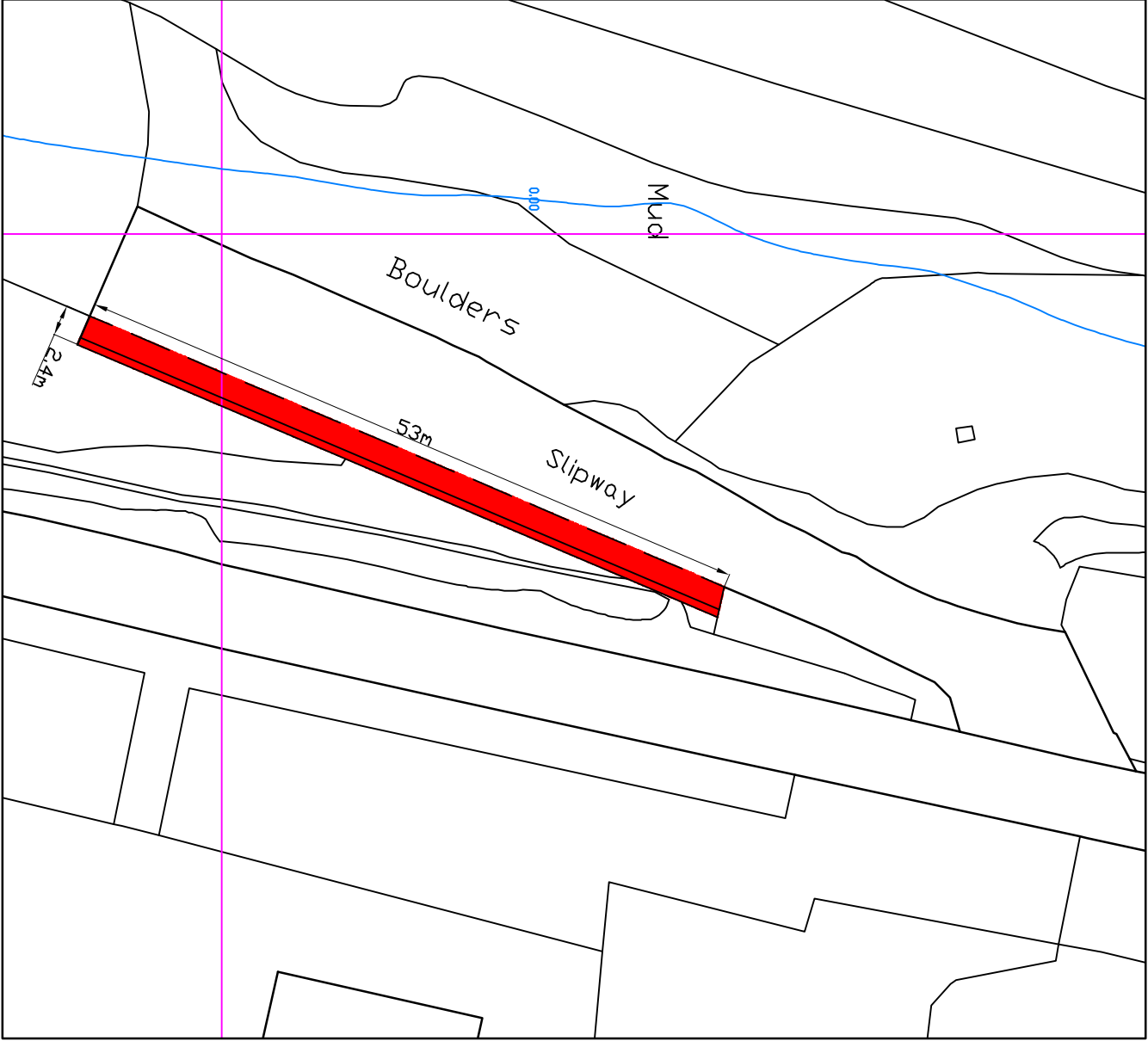
E41 WORKED FINISHES TO IN SITU CONCRETE

10 FINISHING

Timing: Carry out at optimum times in relation to setting and hardening of concrete.

Prohibited treatments to surfaces: Wetting to assist surface working.

Sprinkling cement.



Solutions to Structures Ltd.

Title:

Afan Boat Club

Slipway Widening - Concrete Notes

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Drawn: J.M.Davies.

Scale: 1:500 @A3

Date: 01/04/2021

Drawing No: 21-789-03

