E20 **FORMWORK FOR IN SITU CONCRETE**

To be read with Preliminaries/General conditions.

GENERALLY/PREPARATION

110 LOADINGS: Design and construct formwork to withstand the worst combination of:

- Total weight of formwork, reinforcement and concrete.
- Construction loads including dynamic effects of placing, compacting and construction traffic.
- Wind and snow loads.

170 WORK BELOW GROUND:

- Vertical faces of strip footings, bases and slabs may be cast against faces of excavation, provided:
  - Prior approval is obtained.
  - The faces are sufficiently accurate and stable.
  - Supports to faces are withdrawn progressively as concrete is placed.
  - Adequate measures are taken to prevent contamination of concrete.
- Faces of walls must be cast against formwork.

200 UNDERSLAB SHEET INSULATION:

- Manufacturer and reference: Kingspan Thermafloor TF70 Thickness: 75mm
- Lay sheets on 1200 guage polythene on wall compacted sand blinded hard core.
- Seal all joints with tape recommended by manufacturer or by completely overlaying with 500 gauge polyethylene with lapped joints.
- Ensure that insulation is covered with concrete blinding (see section E10) before fixing slab reinforcement.

CONSTRUCTION

310 ACCURACY: Construct formwork accurately and robustly with adequate supports to produce finished concrete to the required dimensions. Formed surfaces must be free from twist and bow (other than any required cambers), all intersections, lines and angles being square, plumb and true.

320 JOINTS IN FORMS: Construct formwork, including joints in form linings and between forms and completed work, to prevent loss of grout, using seals when necessary. Secure formwork tight against adjacent concrete to prevent formation of steps.

330 INSERTS, HOLES AND CHASES:

- Confirm positions and details to ensure that alterations to and decisions about their size and location are not made without the knowledge and approval of the CA.
- Fix inserts or box out as required in correct positions before placing concrete. Form all holes and chases. Do not cut hardened concrete without approval.

510 RESPONSIBILITY: Strike formwork without disturbing, damaging or overloading structure, and without disturbing props. Notwithstanding other clauses in this specification and any checking or approvals by the CA, the responsibility for safe removal of any part of the formwork and any supports without damaging the structure rests with the Contractor.

520 MINIMUM PERIODS: The following periods (in days) for retaining formwork in position before striking apply to class 42.5 or sulfate-resisting Portland cement concrete with no cement replacement materials or admixtures:

Type of and formwork	Average mean of daily and maximum air temperatures during the period minimum 16°C	7°C	3°C
Vertical formwork to columns, walls and beams	1/2	3/4	1
Soffit forms to slabs	4	6	8
Props to slabs and soffit forms to beams	10	15	20
Props to beams	14	21	28

Submit details of proposed periods for mixes using admixtures or other types of cement.