

Your dream house, *footing to finish*

A construction guide and planner. Know what happens next, and what to check before it disappears.

01

PREPARE

People, dates and the contract

02

GROUND

Soil, footings and the plinth

03

FRAME

Concrete, walls and openings

04

FINISH

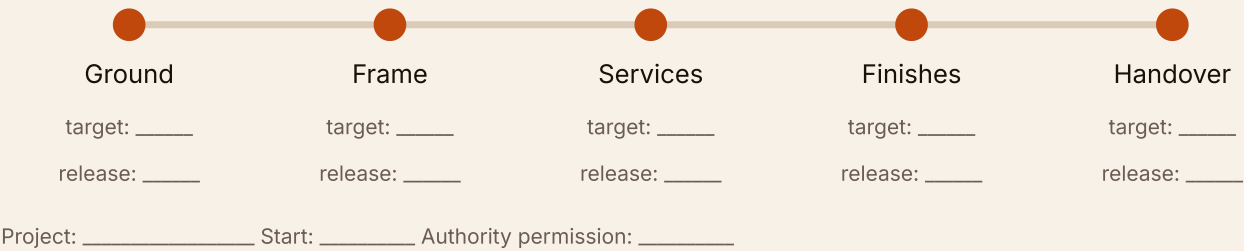
Services, surfaces and handover

A plan for *the whole build.*

A house moves forward when the last stage is accepted. Put agreed dates below.
Then keep a dated inspection sheet for each stage. Your team decides which tasks
may overlap.

01	Prepare The people, the contract and your project dates	03
02	Ground Soil, setting out, excavation, footings and plinth	05
03	Frame Columns, slabs, curing, brickwork and lintels	13
04	Finish Concealed services, surfaces and permission to move in	18

HOW TO READ THIS BOOK



For each task, add the person, planned start and finish, actual dates, test, inspection release and payment reference to your site notebook. Curing and support removal need their own entries.



Illustrative image



CHAPTER 01

Build *with a record.*

You do not need to pour the concrete yourself to help build a good house. You need the right people, the current drawing, and a record of what was checked before the next layer hid it.

Editorial stage checklist and inspection releases. CPWD Specifications 2019, Volumes I and II, provide workmanship models only when included in your contract.

Illustrative image

Choose the team.

Write the agreement.

You lead the brief and keep the record. The designer, engineer and qualified trades make and approve the technical work. Agree responsibilities before the site opens.

WORK	HOMEOWNER	EXECUTION / APPROVAL
Brief, samples and records	You lead	Designer / contractor
Low-risk cosmetic tasks	Within competence; minors supervised	Product instructions
Survey, soil, RCC and supports	Observe; keep evidence	Specialists / engineer
Concealed wiring, gas and pipes	Agree needs; witness tests	Qualified trades / approvals
Waterproofing	Select; retain warranty	Experienced installer
Structural changes / extra floor	Commission assessment	Engineer / authority

Scope and supervision. Name the parties. Attach drawings, specifications, the bill of quantities and exclusions. Name the supervisor and technical staff. State inspections, testing costs, site protection, labour duties and the dispute process.

Dates, money and changes. Write milestones, delay and extension terms, measurement and payment rules. Approve variations and their price in writing. Set defect duties, warranty exclusions and post-completion responsibility. CPWD GCC is a drafting model; tailor the private agreement.



Start below *the surface.*

The ground may change across the plot. A neighbour's footing tells you about their house, not the soil beneath yours.



Illustrative image

Before. Ask the engineer to write the investigation brief. The geotechnical specialist plans the work for this plot and building.

After. The engineer accepts the geotechnical recommendations before selecting the foundation. Bearing pressure must address settlement as well as shear safety.

During. Record the soil layers, groundwater and tests. Keep the investigation tied to the surveyed site.

Who / record / release. Specialist and engineer. Keep the report and acceptance. Release foundation design from these findings; an ebook cannot set a borehole count or footing depth.

Put the drawing *on the ground.*

Setting out turns the plan into pegs and lines. A benchmark is a fixed reference height. It lets the team check every later level.



Before. The surveyor checks the survey, boundaries, approved plan and benchmark with the designer.

After. Obtain the signed setting-out record. Keep the agreed reference points available for later checks.

During. Check building axes, boundary positions and levels. Resolve a mismatch while the lines are still on bare ground.

Who / record / release. Surveyor and site engineer. Keep the marked plan, levels and photographs. Accept setting out before excavation starts.

Open the ground *with a plan.*

An excavation is a temporary structure too. Its sides, water and nearby services need decisions before digging begins.



Before. Locate existing services. Agree protection, safe access and the excavation method with the contractor and engineer.

After. The engineer inspects and accepts the formation: the prepared ground where the foundation will sit.

During. Observe from the contractor's designated safe viewing point. Report unexpected soil, water or movement to the engineer; do not enter the excavation to inspect it.

Who / record / release. Contractor and engineer. Keep formation photographs, observations and acceptance. Release the base work after that inspection.

A clean base *for the footing.*

PCC means plain cement concrete. The specified base gives the next stage a clean, level surface. It does not replace the designed foundation.



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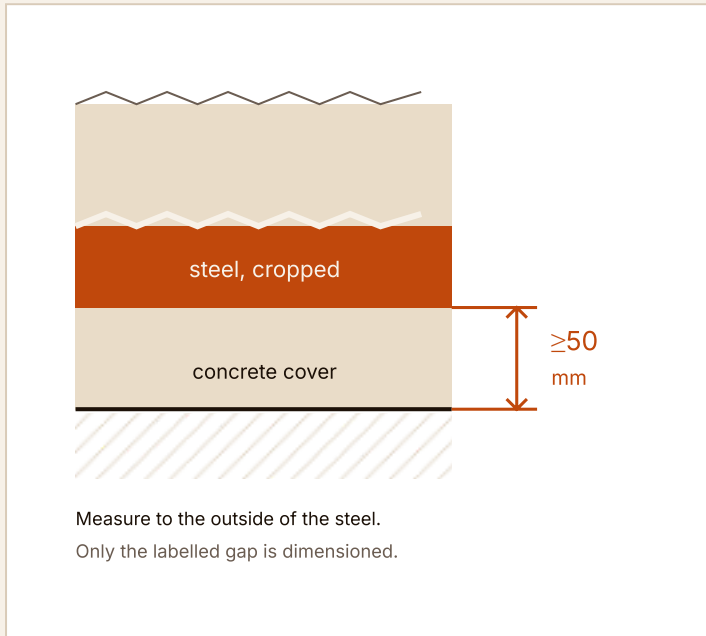
Before. Confirm accepted formation and the PCC specification. Use the drawing's levels and material requirements.

After. Inspect the finished base before steel is placed. Refer defects or level differences to the site engineer.

During. Check levels and compaction. Keep the prepared surface ready for the reinforcement work that follows.

Who / record / release. Concrete contractor and site engineer. Keep the base inspection and photographs. Release reinforcement after acceptance.

Check it, *before the pour.*



The footing carries the house into the soil. Once concrete covers its steel, a photograph and a signed inspection become valuable evidence.

Before. Confirm the current footing drawing and bar schedule: the list of bars and their bends.

During. Check bars, cover blocks, column starter bars and placement against the drawing. The local detail shows the minimum footing cover; the project may need more.

After. Keep pour and test records. Refer any repair to the engineer.

Who / record / release. Steel fixer, concrete contractor and engineer. Keep bar and material records, photographs and the inspection. Obtain release before pouring, then acceptance before later work.

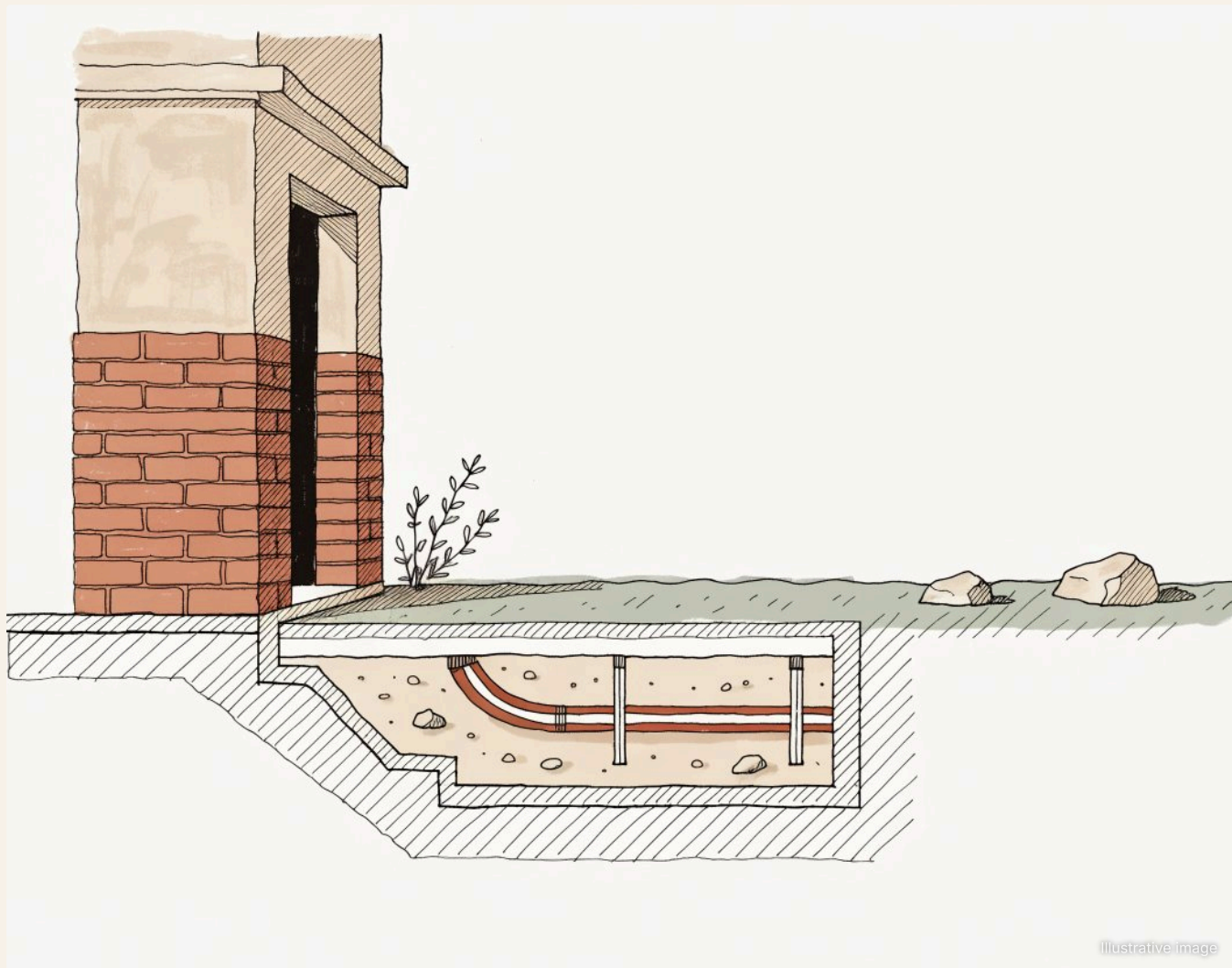


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IS 456:2000 cl. 26.4.2.2 (footing cover ≥ 50 mm); CPWD Specifications 2019, Volume I cls. 5.2, 5.3.3, 5.4; RDSO BS-44 cls. 2.6, 2.8. Original local detail: labelled cover gap to scale in mm; cropped member and steel sizes are unspecified. Use the engineer's foundation design.

Bring the ground *to the right level.*

The plinth is the base of the building above its foundations. Filling around it is part of the work, not a place to hide leftovers.



Before. Confirm finished levels and service routes. Coordinate sleeves, treatment and damp protection before filling hides them.

After. Record finished levels and inspect the fill. Refer changes at service crossings or disturbed treatment to the team.

During. Use specified filling and compaction. Check the work as it progresses against the agreed method.

Who / record / release. Earthwork contractor and site engineer. Keep level readings, fill records and concealed-route photographs. Release floor-base work after acceptance.

Protect the places *you will cover.*

Treatment depends on the foundation arrangement and the selected product. A specialist plans the sequence around the work that follows.



Before. Appoint the specialist. Agree the product and treatment plan for the actual foundation interfaces.

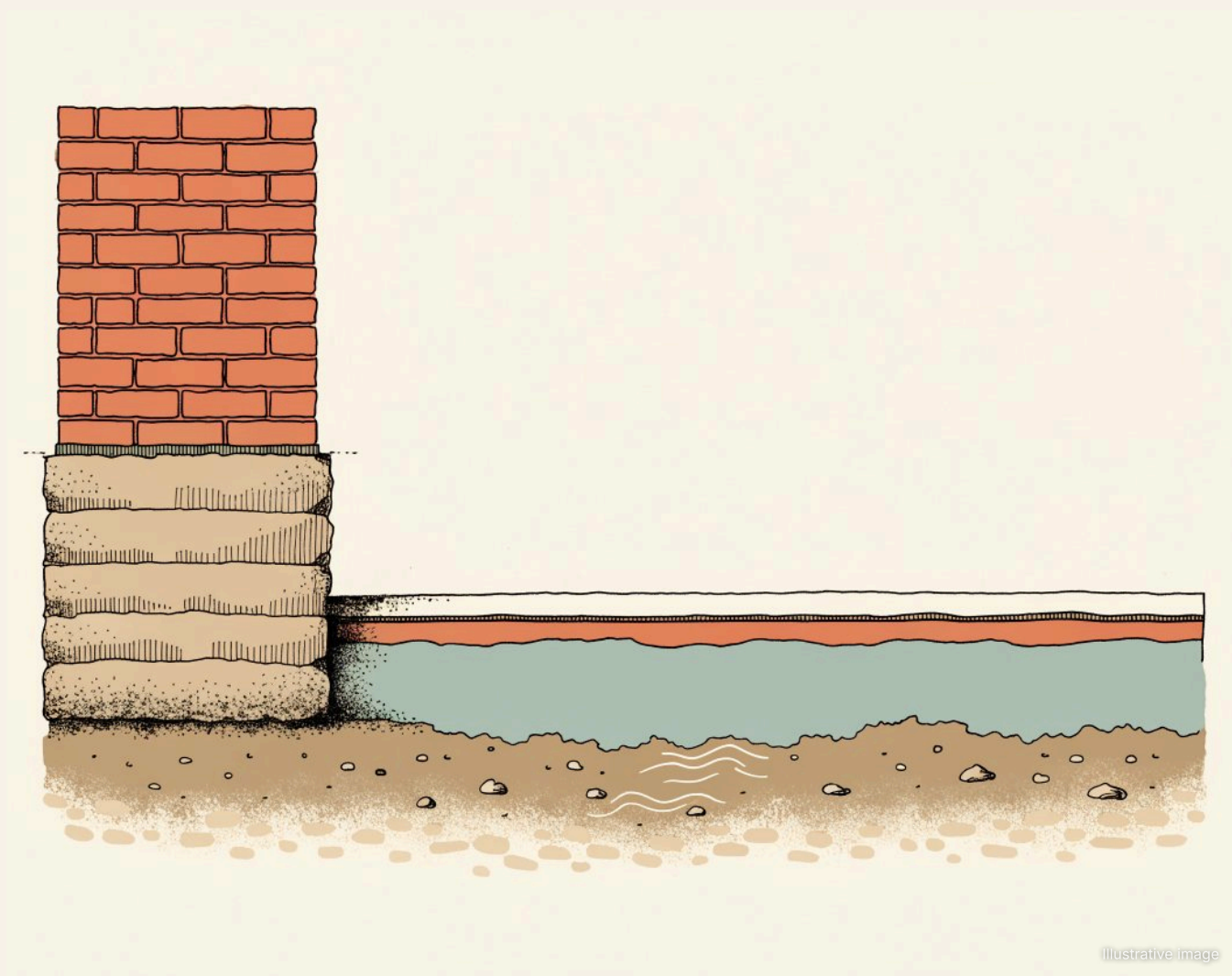
After. Obtain the certificate. Identify disturbed treatment and have the specialist restore it as specified.

During. Check required interfaces and suitable weather conditions. Coordinate treatment with excavation, filling and later service work.

Who / record / release. Treatment specialist and site engineer. Keep the product record, treated-area photographs and certificate. Accept each interface before covering it. Chemical application belongs to the specialist.

Keep the barrier *continuous*.

DPC means damp-proof course. It is a specified barrier against moisture at the wall base. A gap at a junction can undo careful work elsewhere.



Before. Confirm where the DPC goes and what material the specification calls for. Coordinate it with the floor and wall details.

After. Inspect the complete barrier while it is visible. Record defects and the accepted correction.

During. Check continuity and junctions. Refer interruptions, level changes or service crossings to the designer.

Who / record / release. Contractor and site engineer. Keep material records and junction photographs. Release covering work after the inspection.

Keep every column *on its drawing.*

RCC means reinforced cement concrete: concrete and steel working together. A column needs the specified bars, links and cover in the right place.



Before. Confirm the current column drawings, bar schedule and approved material records with the engineer.

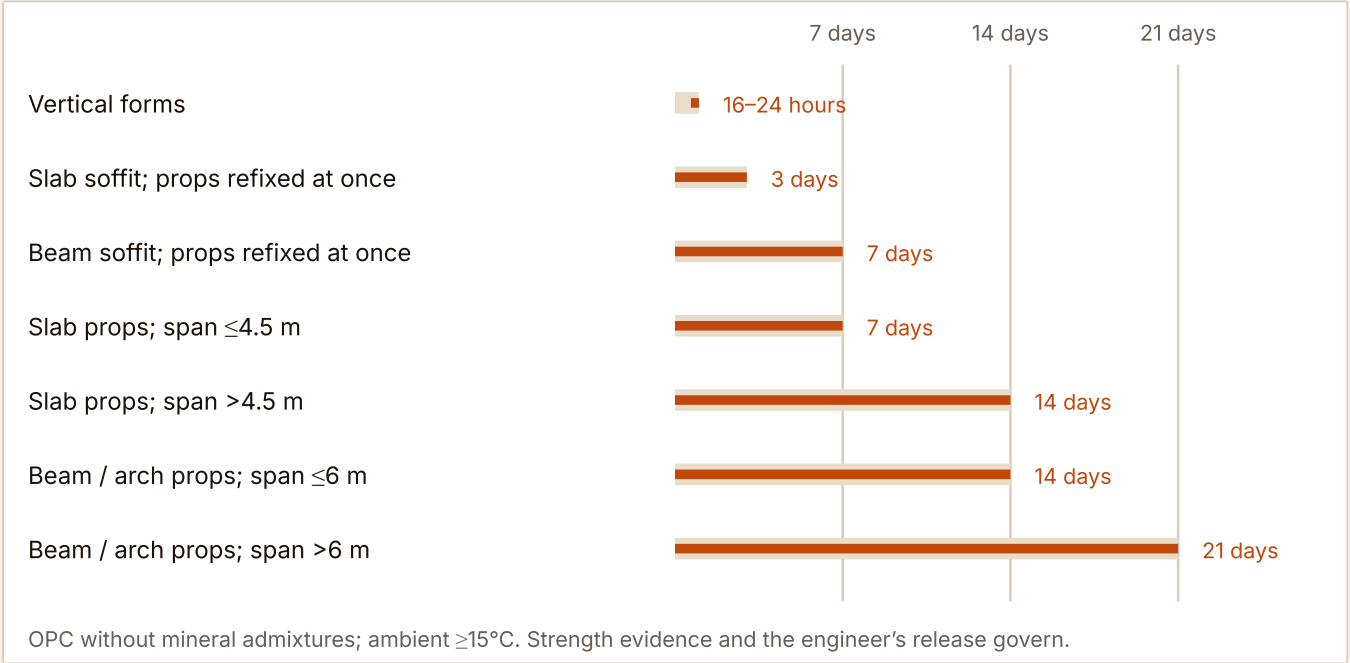
After. Keep the inspection and concrete records. Refer visible defects or proposed repairs to the engineer.

During. Check bars, links, cover and verticality. Where ductile detailing applies, compare hooks and lap locations with the approved details.

Who / record / release. Steel fixer, formwork and concrete teams; engineer approves. Keep cage photographs and tests. Obtain the pre-pour release before closure hides the cage; never move a column on site without revised design.

Support it until *it can stand.*

The chart shows periods for OPC concrete without mineral admixtures, at ambient temperatures of at least 15°C. Other cementitious mixes need the amended provisions and the engineer’s assessment. Maintain adequate curing; strength evidence and the engineer’s release govern. Concrete strength governs; a date alone does not release the supports.



Before. Check formwork, supports and coordinated openings with the engineer. Soffit means the underside; props are its temporary supports.

During. Check bars, links, cover and embedded items before pouring. Record concrete placement and tests.

After. The engineer decides repairs and releases stripping from strength evidence. Removing soffit forms and removing props are separate decisions.

Who / record / release. Formwork, steel and concrete teams; engineer approves. Keep inspections, tests and the support-removal record. The formwork team must refix props immediately after each panel is removed, following the engineer’s sequence; never strip the whole slab before refixing props.

Concrete needs *care after the pour.*

Curing maintains the conditions concrete needs as it gains strength. Plan the water and method before the concrete arrives.



7 days

Minimum moist curing for OPC concrete without mineral admixtures; increase to at least 10 days in hot, dry weather.

IS 456:2000 cl. 13.5.1

10 days

Minimum moist curing for blended cement or mineral admixtures, and for any concrete exposed to hot, dry weather.

IS 456:2000 cl. 13.5.1

14 days

Recommended extension for blended or mineral-admixture concrete.

IS 456:2000 cl. 13.5.1

Before. Identify the cement. Agree the method, water and person responsible.

After. Retain the curing record. The engineer may require longer. Curing completion does not release props or loading.

During. For moist curing, keep exposed concrete continuously damp or wet using the agreed method; log dates and interruptions.

Who / record / release. Concrete contractor; site engineer verifies the log and accepts completion separately from support removal.

Walls follow *the agreed plan.*

Openings and services belong in the wall layout before the wall is built. A neat face alone does not show the whole quality of the work.



Illustrative image

Before. Confirm the layout, openings and specified masonry. Coordinate service routes and lintel positions.

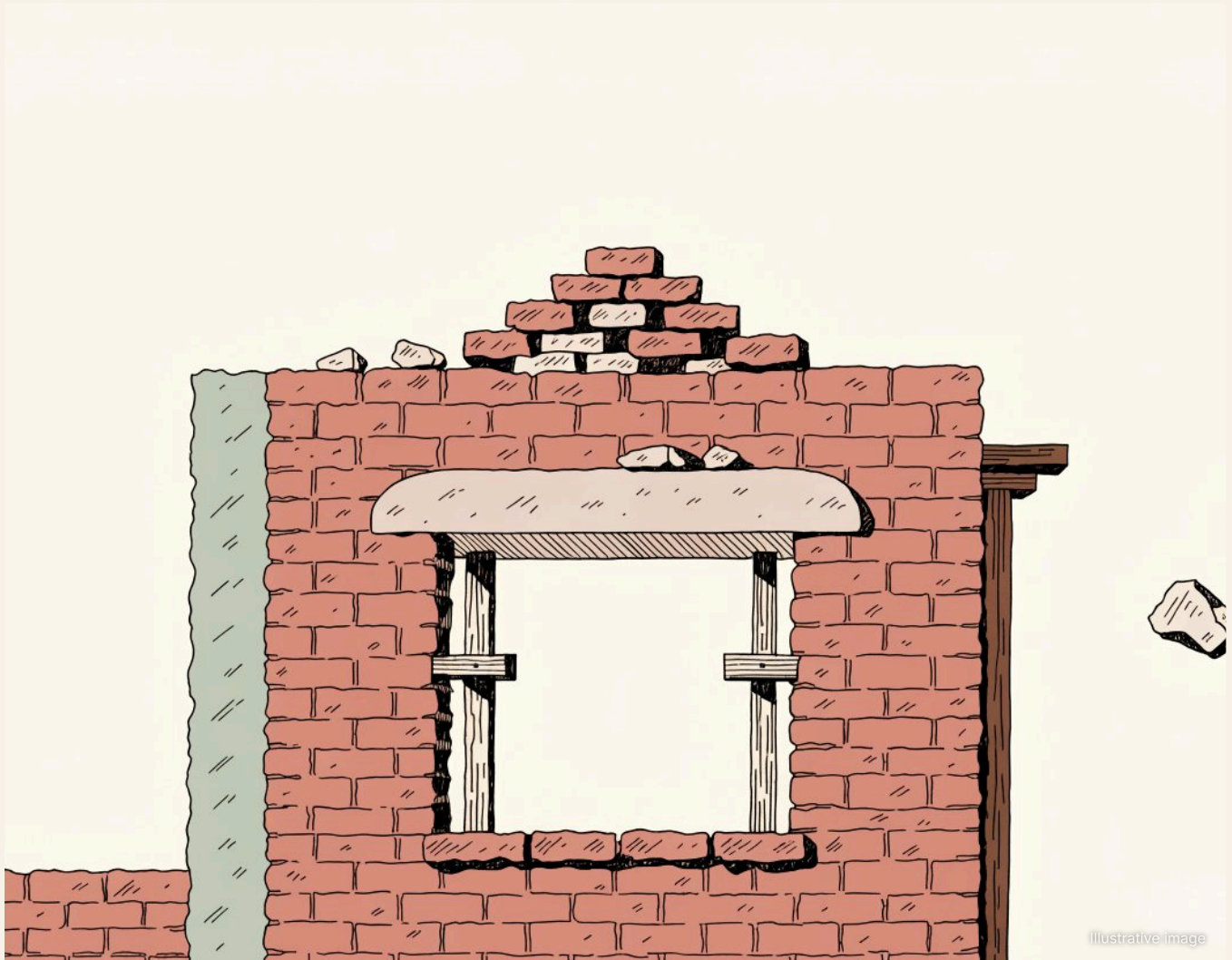
After. Inspect the wall and cure as specified. Record defects before plaster hides the joints.

During. Check bond, joints and alignment. Bond is the arrangement that ties the masonry together.

Who / record / release. Masonry contractor and site engineer. Keep layout checks and wall photographs. Accept the work before finishes; refer altered openings to the designer and engineer.

An opening needs *its own support.*

A lintel carries work above an opening. Its member and bearing details come from the approved structural drawing.



Before. Confirm the approved lintel member and bearing detail: how it rests on the support at each end.

After. Obtain the engineer's release before loading the member. Record any repair decision.

During. Check reinforcement and levels. Keep temporary support and the opening arrangement aligned with the drawing.

Who / record / release. Structural and masonry contractors; engineer approves. Keep the detail, inspection and photographs. An illustration cannot set the lintel size or bearing length for your house.

Decide the routes *before the plaster.*

Conduits are the routes for wiring. Coordinate them with pipes, openings and the structure so trades do not solve conflicts by cutting first.



Before. Agree the coordinated routing and circuit schedule with the electrical designer. Confirm the required service points.

After. Inspect and carry out the applicable tests before closure. Complete installation verification when the wiring and equipment are ready.

During. Check the wiring system and separation from other services. Refer changes that affect the structure before execution.

Who / record / release. Qualified electrician and electrical designer. Keep route photographs and inspection/test records, including applicable continuity, insulation, polarity and protective-device tests. Release concealment after acceptance.

Test the pipes *while you can see them.*

A service layout should show how water arrives, how waste leaves and how a repairer can reach the parts that need attention.



Illustrative image

Before. Confirm supply, drainage and access layouts. Agree the pipe system, specified test and who witnesses it.

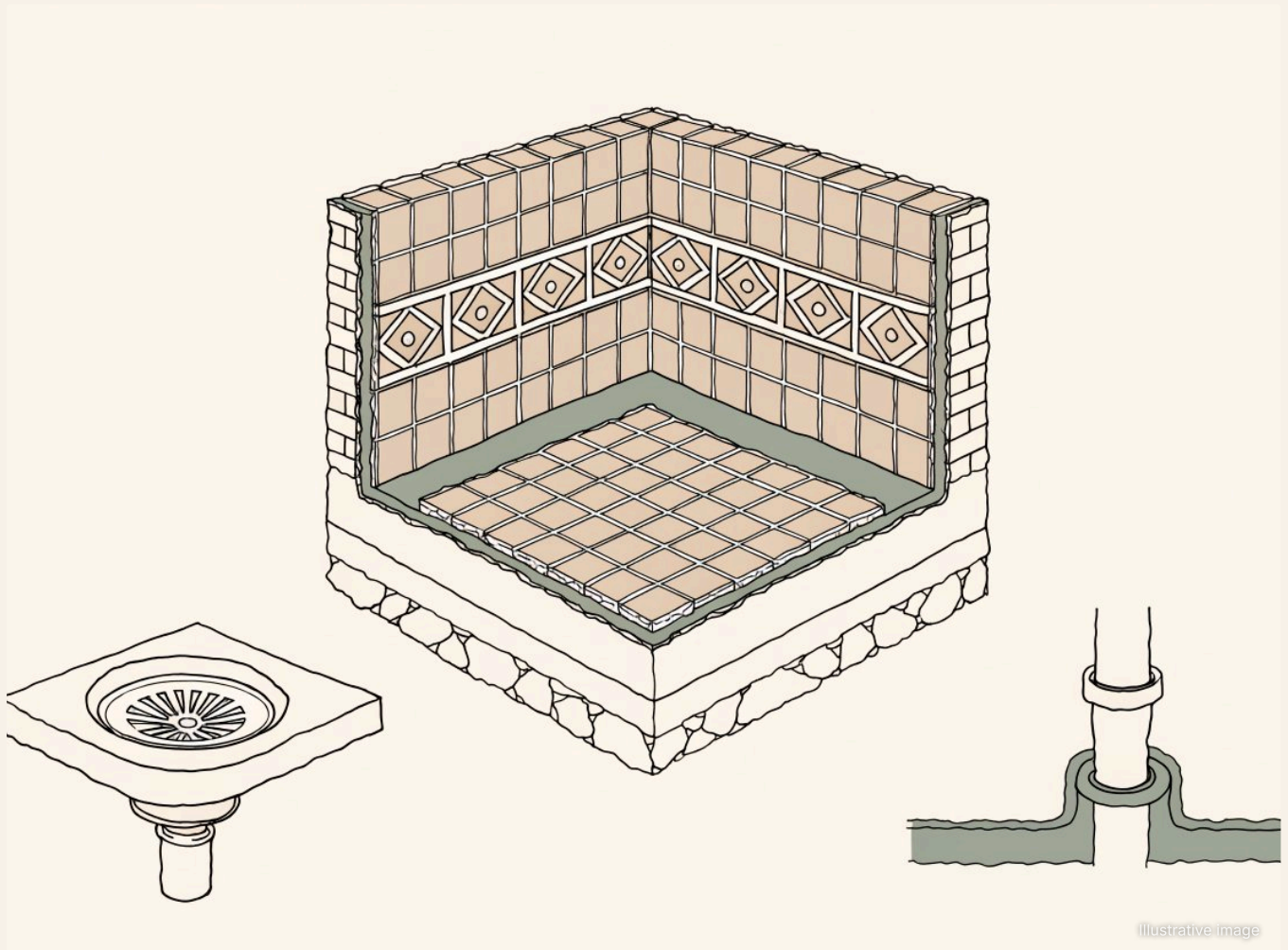
After. Complete the specified tests before concealment. Resolve defects, then retain the accepted result.

During. Check joints, supports and service access. Photograph the routes before they disappear.

Who / record / release. Qualified plumber and services designer/site engineer. Keep product records, photographs and tests. Release closure after acceptance. IS 1172 supports sanitation planning; it does not supply every pipe system's test procedure.

The junction is *part of the system.*

A waterproof floor needs a working connection to walls, drains and pipe penetrations. Select the complete system before selecting its visible finish.



Before. Agree the selected system and junction details. Coordinate the substrate, drains, penetrations and later finishes.

After. Complete system-specific curing and testing. Record defects, accepted repairs and the test result.

During. Inspect the junctions and pipe crossings against those details. Follow the system's preparation and application requirements.

Who / record / release. Experienced installer and designer/site engineer. Keep product details, junction photographs, warranty terms and tests. Release the protective layer or finish only after acceptance.

Check the wall *before it turns smooth.*

Plaster covers a great deal of evidence. Accept the wall and concealed services first, then check the new surface as its own stage.



Before. Confirm the surface and specified material. Check that hidden-service inspections and tests are accepted.

After. Cure as specified. Investigate defective areas rather than simply covering them with paint.

During. Check specified thickness, alignment and finish. Review corners, reveals and junctions while work is visible.

Who / record / release. Plaster contractor and site engineer. Keep service releases, surface photographs and defect decisions. Accept the substrate before the next finish.

Approve a sample. *Check the whole floor.*

A sample helps you choose. The installed floor still needs its base, joints, levels and transitions checked together.



Illustrative image

Before. Approve the product, base and layout. For wet areas, compare slip information, drainage and waterproofing compatibility.

After. Inspect the finish and protect it during remaining work. Keep the cleaning and maintenance instructions.

During. Check bedding, joints and levels against the selected system. Review doorways and floor transitions.

Who / record / release. Flooring installer and designer/site engineer. Keep the approved sample, product data and inspection. Accept before covering for protection. IS 1443 applies to cement-concrete tiles; other floors need their own specification.

A good finish starts *under the colour.*

Paint belongs to a system: substrate, preparation, primer and finish. The colour card cannot tell you whether those parts suit each other.

01

Preparation

Painting contractor and designer / site engineer

Accept the substrate and paint system. Confirm preparation, primer compatibility and product limitations. Keep the sample approval.

Before

agree the system

02

Application

Follow the specified preparation and application. Compare the work with the approved sample and retain product records.

During

check the work

03

Acceptance

Inspect coverage and finish. Record defects and repairs. Keep care instructions; release the finished surface after inspection.

After

record and release



Illustrative image

CPWD Specifications 2019, Volume II cls. 13.22.2–13.22.3 is an exterior-paint example. Interior and other finishes need their selected manufacturer system; no universal coat count is prescribed.

Accept the house *with its evidence.*

Commissioning means testing the finished services in use. Keys, a final payment and permission to occupy are separate parts of completion.

BEFORE · AGREE THE SCHEDULE

- ☐ **Name the tests and documents.**
Contractor, qualified trades and designer agree who checks and witnesses.
- ☐ **Confirm the authority process.**
Record your local completion or occupancy requirements.

DURING · TEST AND RECORD

- ☐ **Commission the services.**
Retain applicable electrical verification and specified service tests.
- ☐ **Write the defect list.**
Name the responsible person and agreed repair date.

AFTER · KEEP THE HANDOVER PACK

- ☐ **Drawings and certificates.**
Approved and as-built drawings; structural certificates required by the applicable authority or agreed in the contract.
- ☐ **Tests and concealed-work photographs.**
Keep accepted results and routes for future repairs.
- ☐ **Manuals, warranties and final measurements.**
Include instructions, exclusions and the final account.
- ☐ **Close defects and obtain permission.**
Release handover through the agreed inspection; occupy through the authority process.



Illustrative image

The house is finished. *The record stays.*

Keep the book beside your project folder. A useful record explains what is hidden, what was tested and who accepted the work.

Your local verification

Authority: _____. Governing rules and editions: _____. Designer / engineer: _____. Confirm these before starting.

Your stage release

Stage / date: _____. Drawing revision: _____.
Test / inspection: _____. Accepted by: _____.
Outstanding work: _____.

Your change record

Change: _____. Revised drawing: _____. Agreed price / time: _____. Written approval: _____.

Your next step

Use the other NirmanDost guides for house design, interiors, structural checks and the drawing workbook.
Tools and corrections: nirmandost.in.



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