



BUSINESS PLAN · INDIA

Bricks and Blocks Manufacturing Unit

The product takes too long to make

BUILD MATERIALS

AISEVAK.IN · BY ABL DIGITAL TECHNOLOGIES

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This document is confidential and prepared for planning purposes. All financial figures are illustrative model assumptions for an Indian MSME context and must be validated against live quotes, local rates and professional advice before any investment or borrowing decision.

1. Executive Summary

This plan sets out a **Bricks & Blocks Manufacturing Unit** in India — an autoclaved aerated concrete (AAC) and fly-ash concrete block plant supplying walling material to builders, contractors, infrastructure executors and the retail construction market from an owned plant with an attached curing yard.

The RMC plant that opened the manufacturing sub-model had a product that died in ninety minutes. This one has the opposite constraint, and it is worth stating as an inversion because the two plants are otherwise siblings. Concrete could not be inventoried because it perished; block cannot be made to order because it takes too long to make. An autoclave charge is hours, but the cycle from slurry to a block that may safely go into a wall runs to weeks, and a fly-ash concrete block requires a full cure before it can be dispatched at all. So an order received today cannot be produced today at any price, and the plant runs on a forecast rather than on a queue. The consequence shows up on the balance sheet: **the curing yard is not a warehouse, it is a bank account with a maturity date** — twenty-six to thirty-one days of production standing still, paid for and earning nothing until it has aged. **Where the RMC plant put 42% of its capital into a moving fleet, this plant puts 45% into a fixed plant and another 13% into land and a yard for stock to sit in. One business's capital is in motion; the other's is standing still, and that difference is why this plant breaks even at 56-60% utilisation against the concrete plant's 40%.**

The second point is the environmental and regulatory one, and this plan takes a position rather than describing the market neutrally. It does not model a red-brick kiln. A red-brick plan written today is a plan whose principal raw material is agricultural topsoil, permanently removed; whose traditional firing technology is a recognised source of particulate emission; whose operating calendar in the National Capital Region and other airsheds is set by seasonal closure orders it does not control; and which is under a mandated migration to zig-zag firing in several states. Red brick is made and sold at enormous scale and this plan does not claim otherwise — it states why it is not the business being financed here. This plant is built on fly ash, which is a waste stream from coal power generation that the MoEFCC notification actively directs into construction materials within a defined radius of thermal plants. That is a genuine regulatory tailwind, and the plan also names its dependency honestly: a raw material that is nearly free today is nearly free because nobody else wants it, and as coal generation is displaced that will change.

The third is a selling problem disguised as a pricing problem, and it is the commercial core of this business. An AAC block costs several times what a red brick costs, and the customer compares those two numbers. It is the wrong comparison. One block replaces eight or nine bricks by volume, uses a fraction of the mortar, needs less plaster, is laid several times faster, and — being roughly a third of the weight — reduces the dead load the structural design has to carry. The number that decides the customer's actual cost is the delivered, installed cost of a square metre of finished wall, and on that number the block usually wins. The category loses sales it should win because it is quoted in a unit the customer measures wrongly. This plan therefore sells the arithmetic rather than the product: **quotations issued on installed wall cost per square metre rather than per piece rise from 18% to 92%, and where that comparison is presented, conversion runs at 41% against 12% where it is not.**

And the fourth inherits the concrete plant's integrity problem in a new mechanism. There, the temptation was to put less cement in the mix, invisible for twenty-eight days. Here it is to dispatch blocks before they have cured, which is invisible at delivery, frees yard space, converts stock into cash immediately, and shows up months later as cracking in somebody's wall — by which time it is a plastered, painted surface and an argument about workmanship. Both are the same shape of failure: a quality shortcut that pays now and is

discovered, if at all, after the building is occupied. This plan measures it: **blocks dispatched before the specified cure period fall from 7.4% to zero**, and the honest admission is that reaching zero costs yard space and working capital that a less scrupulous competitor does not carry.

This plan models a plant requiring **₹15.00 crore** (₹4.50 crore promoter + ₹8.00 crore term loan + ₹1.00 crore equipment finance + ₹1.50 crore cash-credit limit), moving from **₹14.08 crore turnover and a ₹1.32 crore loss** to **₹27.84 crore turnover and ₹2.20 crore profit** by Year 3, with capacity utilisation rising from 42.7% to 77.3% against a break-even of 56–60%. (AAC and fly-ash concrete block manufacture — figures illustrative.)

2. Business Description, Vision & Legal Structure

Concept: An AAC and fly-ash block plant run on utilisation, full cure and installed-cost selling, built deliberately on an industrial waste stream rather than on topsoil.

Vision: To be the plant whose blocks are never the reason a wall cracks.

Mission: Never dispatch before cure; never run an autoclave half charged; quote the wall, not the piece; train the mason who will lay it; and document the fly ash we buy.

Legal structure options

- **Private Limited** — necessary at this scale: ₹9.00 crore of term and equipment borrowing, statutory environmental consents, BIS licensing and institutional supply all require a corporate form.
- **LLP** — workable for two or three promoters pooling capital, weaker for structured project finance.
- **Proprietorship** — inappropriate against ₹15 crore of project cost and a product that becomes structural.

Regulatory anchor: a manufacturing licence load with a specific environmental character. **BIS certification against IS 2185 Part 3 for autoclaved cellular concrete blocks — dry density, compressive strength and drying shrinkage are the specified parameters, and blocks supplied outside them are a liability that follows the material into a wall.** State Pollution Control Board consent to establish and to operate under the Air and Water Acts, covering fly-ash handling, boiler emissions and process effluent; fly ash is a fine particulate handled in bulk, so dust containment at unloading, silos and conveyors is a design requirement rather than a housekeeping matter. The MoEFCC fly-ash utilisation notification is the framework that makes this plant's raw material both available and, within the specified radius of coal thermal power stations, actively directed toward construction use — and it also imposes documentation on what is lifted, from whom and under what agreement. Then: Boilers Act registration and periodic inspection for the steam boiler, and statutory pressure-vessel certification and inspection for the autoclaves, which are the two items in this plant that can kill somebody; factory registration under the Factories Act with attendant safety, shift and welfare obligations; high-tension electrical sanction and DG consent; fire safety; **EPF and ESI across a workforce that includes a large yard and handling component**; GST with input credit and e-way bills on despatch; and commercial vehicle compliance for the delivery fleet.

3. Promoter & Ownership

Led by a promoter with building-materials manufacturing, construction or industrial-process background. Three competences decide outcomes. *Forecasting into a fixed lead time*, because production cannot follow demand — the plant commits weeks in advance, and both errors are expensive in opposite directions. *Technical selling*, since this product is bought by people who will compare it to a brick on price per piece and must be walked through an arithmetic they have not done; a promoter who cannot conduct that conversation will discount instead, and discounting a product that is already more expensive per piece is a losing position. And *the discipline to hold cure time when the yard is full and the money is*

needed, which is the specific temptation of this business and the one that ends its reputation. Ownership, equity & investor terms are editable inputs.

4. Market Analysis — India

Indian walling material is migrating from fired clay brick toward fly-ash, concrete and autoclaved aerated blocks — driven by regulation on clay extraction and kiln emissions, the fly-ash utilisation framework, high-rise construction where structural dead load matters, and a labour market that rewards faster laying.

Demand drivers

- **Regulatory pressure on clay-brick kilns** — topsoil restrictions, emission norms, seasonal airshed closures and mandated zig-zag conversion.
- **The fly-ash utilisation notification**, which both supplies the raw material and directs demand toward it near thermal stations.
- **High-rise construction**, where lower wall dead load translates into structural and foundation savings a designer can quantify.
- **Labour cost and scarcity**, since a larger block laid with thin-bed mortar covers a wall far faster than brick.
- **Institutional and government specification**, increasingly requiring fly-ash-based walling on public projects.
- **Thermal performance**, which matters more as energy codes tighten on commercial buildings.

Market sizing (illustrative framing)

Layer	Definition	Indicative scale
TAM	Walling material consumed in the served region	Construction-activity defined
SAM	Volume within an economic freight radius (a COST boundary, unlike RMC's time one)	Freight-bounded; crossable at a price
SOM (Yr 1-3)	Volume × contribution, constrained by utilisation	32,000 → 58,000 m³; utilisation 42.7% → 77.3%

This plant's economic radius is worth contrasting with the concrete plant's, because the two constraints look alike and behave completely differently. Ready-mixed concrete has a time radius that cannot be crossed at any price — beyond ninety minutes the product does not exist. Block has an ordinary freight radius: it is heavy, low in value per tonne, and delivered cost rises with distance until a nearer plant wins, but nothing about the product prevents it travelling three hundred kilometres if somebody is willing to pay. That single difference changes the whole growth model. The RMC operator grows by building another plant because the model does not stretch; this plant grows by selling further out at a thinner delivered margin, and can serve a genuinely large region from one location. Two consequences follow. First, freight is a commercial variable rather than a physical wall, so pricing should be quoted delivered and margin measured after freight by customer location — a distant project at list price may be less profitable than a nearby one at a discount, and plants routinely discover this only when the year closes. Second, competition is regional rather than local, so the plant is exposed to capacity added anywhere in a wide radius, and a new plant two hundred kilometres away is a competitor in a way that a new RMC plant two hundred kilometres away would not be.

5. Competition & Competitive Advantage

Landscape: established AAC manufacturers with regional brand positions and dealer networks; fly-ash and concrete solid-block makers competing at lower price points and often without certification; **the red-brick kiln sector, which remains the volume default in most Indian markets and competes almost entirely on price per piece**; and larger integrated building-materials groups entering the category. **The product is specified by parameter — density, strength, size — so a certified block from two plants is substitutable, and competition runs on delivered price, consistency, availability and the quality of the technical argument made to the specifier.**

The business's edge

- **Installed wall cost quoted per square metre**, which reframes the comparison the customer is making wrongly.
- **Full cure held without exception**, measured and reported rather than asserted.
- **Mason training as a distribution strategy**, because an untrained mason breaks the product and blames it.
- **BIS conformity with published test data**, against a competitor set where certification is uneven.
- **Documented fly-ash sourcing**, which matters for the customer's own compliance on public work.
- **Delivered-margin discipline by location**, so distance is priced rather than absorbed.

The most instructive competitor here is not another block plant — it is the mason, and the plan should say so plainly because it determines how the product is sold. A mason who has laid clay brick for twenty years will pick up an AAC block, handle it as he handles a brick, cut it with the wrong tool, lay it in a thick cement mortar bed, and produce a wall that performs worse than brick while consuming more material than it should. He will then tell the contractor the block is weak, and he will be believed, because he is the person on site and the manufacturer is not. The product's largest reputational risk in India is not manufacturing defect; it is correct product laid incorrectly by someone who was never shown how. Three responses run through this plan. **Masons trained directly — none in Year 1's opening months, 890 cumulatively by Year 3 — with thin-bed mortar, the correct cutting and grooving tools and jointing practice demonstrated on site rather than in a brochure. Site handling supervised on first deliveries to each new customer, since most breakage happens in unloading and stacking by people who think they are handling brick. And breakage attributable to customer handling replaced anyway in the early relationship — 2.9% falling to 1.1% of despatched value — because winning the argument about whose fault it was is worth less than the account, and because a broken block in a stack is an advertisement against the category.**

6. Product, Cure Discipline & the Unit of Comparison

Segment / element	Character	Economics
High-rise & commercial projects	Specified, repeat volume, dead-load argument	The core; 60-90 day credit
Institutional & government work	Fly-ash specification mandated	Reliable, documentation-heavy
Dealer & retail channel	Smaller lots, faster payment	Better collection; needs stock availability
Individual house construction	Price-sensitive, brick-comparing	Won only on the installed-cost argument
The cure period	A physical requirement, not a policy	Dispatched early = a crack months later

Blocks dispatched before specified cure	The integrity metric of this business	7.4% → 1.2% → 0%
Autoclave charges run below full charge	Steam costs the same either way	22% → 9% → 3%
Quotations on installed wall cost per m ²	The right unit of comparison	18% → 92%; conversion 41% vs 12%

The autoclave is the reason this plant's economics are lumpy rather than linear, and a promoter who models production as a smooth rate will misread his own cost structure. An autoclave charge consumes essentially the same steam whether it is full or two-thirds full — the vessel must reach pressure and temperature and be held there, and the fuel cost of that cycle is a function of the vessel rather than of what is inside it. So a charge run at seventy per cent capacity does not cost seventy per cent; it costs close to a hundred, and the difference comes directly out of contribution. Output therefore moves in charges rather than in cubic metres, and the operating question every day is not "how much can we make" but "can we fill the next charge". Three disciplines follow. Casting scheduled to fill charges completely, with the cutting line paced to the autoclave rather than the autoclave fed by whatever the line produced — under-filled charges fall from 22% to 3%. Product mix planned so that sizes sharing a charge are cast together, since a charge split across incompatible cycles is the commonest cause of an under-filled vessel. And fuel and power measured per cubic metre of saleable output rather than per charge (₹306 → ₹286), because the per-charge figure looks stable while the per-cubic-metre figure is where the loss actually appears.

7. Go-to-Market — the Specifier, the Dealer and the Mason

Acquisition

- **Structural consultants and architects**, who can be shown the dead-load and foundation arithmetic and who specify the material class.
- **Builders and contractors**, reached with the installed wall cost comparison rather than a price list.
- **Dealer network** for retail and smaller project volume, which requires stock availability the cure period makes non-trivial.
- **Government and institutional tendering**, where fly-ash specification is often mandatory.
- **Mason and site-supervisor training**, treated as distribution rather than as marketing.

Retention

- **Dimensional and density consistency**, which is what a repeat contractor actually values.
- **Availability**, because a customer who cannot get blocks for a fortnight will re-specify to brick and not come back.
- **Site support on first deliveries**, which prevents the handling failures that get blamed on the product.
- **Published test data** against IS 2185 Part 3, filed by the customer's quality team.

Availability is the retention risk that the cure period creates and that most plans for this business fail to price. A contractor whose wall programme starts on Monday cannot wait three weeks, and the plant cannot compress the cure to help him. So the only way to be available is to have already made the blocks — which means carrying twenty-six to thirty-one days of production in the yard as a matter of policy, financed, insured, occupying land, and exposed to a demand forecast that may be wrong. The alternative, running lean and quoting a lead time, loses exactly the orders the plant most wants, because the customer who needs material

now is the customer who is not shopping on price. This plan carries the stock and states its cost rather than hiding it. **The curing yard is 12.7% of project cost in land and development and a further material share of working capital, and it earns nothing while it stands. What it buys is the ability to say yes —** and the discipline that makes it affordable is **forecasting by segment rather than in aggregate, so the yard holds the sizes and densities that are actually moving rather than a comfortable total.**

8. Operations Plan (batch, cast, cut, autoclave, cure, dispatch)

- **Fly-ash intake:** lifted under documented agreements from identified thermal stations, **with quality variation between sources tested on receipt, since fly ash is a by-product whose consistency is nobody's production target.**
- **Batching & casting:** slurry proportioned by weight; **rise and green-strength monitored, because a cake that has not risen correctly is discovered at the cutting wire and by then the whole mould is scrap.**
- **Cutting:** wire-cut to size with dimensional tolerance recorded, **since dimensional consistency is what makes thin-bed mortar possible and thin-bed mortar is most of the product's on-site advantage.**
- **Autoclaving:** charges filled completely and cycled to specification; **a curtailed cycle to save fuel or free the vessel is the same category of shortcut as under-cementing concrete.**
- **Curing & yard:** stock aged by batch with dispatch blocked before the specified period — **enforced in the dispatch system rather than by instruction, because the pressure to release comes precisely when the yard is full and the cash is short.**
- **Handling:** palletised and shrink-wrapped; **breakage measured separately at plant, in transit and on site, since the three have different causes and only the first is a production problem.**
- **Testing:** dry density, compressive strength and drying shrinkage tested against IS 2185 Part 3 by batch, **with the lab reporting to the promoter and not to production.**
- **Delivery & site support:** first delivery to each new customer supervised for unloading and stacking.
- **Boiler & pressure vessels:** statutory inspection and maintenance calendars held absolutely, **these being the two assets in the plant capable of killing an employee.**
- **Credit:** limits enforced before despatch, inheriting the vertical's discipline.

Control points

Area	Activity	Control point
The real constraint	Capacity utilisation against 56-60% break-even	42.7% → 58.7% → 77.3%
Where the fuel goes	Autoclave charges run below full charge / fuel & power per m ³	22% → 3% / ₹306 → ₹286
The integrity metric	Blocks dispatched before specified cure	7.4% → 1.2% → 0%
Capital standing still	Curing yard stock as days of production	31 → 28 → 26 days
The right unit	Quotations on installed m ² / conversion where presented vs not	18% → 92% / 41% vs 12%
The mason problem	Masons trained (cumulative) / site breakage replaced anyway	0 → 890 / 2.9% → 1.1%
Product conformity	Batches meeting IS 2185 Part 3 on density, strength & shrinkage	97.1% → 99.6%

Supply & commercial	Fly ash under documented agreements / receivable days / top-3 share	62% → 100% / 74 → 54 / 44% → 26%
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Dispatching before cure deserves the same direct treatment the concrete plant gave under-cementing, because it is the identical failure in a different mechanism and it is the specific way this business destroys itself. A block released a week early looks finished. It is the right size, the right colour, and it stacks and loads normally. It goes into a wall, is plastered and painted, and some months later the wall develops shrinkage cracking — at which point the block is behind two coats of finish, the mason blames the material, the manufacturer blames the workmanship, and nobody can prove anything. The commercial pull toward it is precisely what makes it dangerous: it happens when the yard is full, when an important customer is waiting, and when the month's collections are short — that is, when the pressure is highest and the decision looks smallest. The control has to be structural. Dispatch blocked in the system by batch age rather than permitted by instruction, so releasing early requires an override that is recorded and reviewed rather than a phone call that is not. Yard capacity sized for the cure period plus the forecast error, because a plant that has not built room to wait will eventually not wait. And the metric published internally every month — early dispatches 7.4% → 1.2% → 0% — with the honest acknowledgement that reaching zero costs land, working capital and occasionally an order, none of which a less scrupulous competitor is paying for.

9. Standards, Environmental & Statutory Compliance (India)

- **BIS certification against IS 2185 Part 3** for autoclaved cellular concrete blocks — **dry density, compressive strength and drying shrinkage, with blocks supplied outside specification carrying liability that follows the material into a wall.**
- **SPCB consent to establish and to operate** under the Air and Water Acts; **fly ash is a fine particulate handled in bulk, so dust containment at unloading, silos and conveyors is a design requirement rather than housekeeping;** boiler emissions and process effluent monitored.
- **The MoEFCC fly-ash utilisation notification**, which makes the raw material available and directs demand toward fly-ash-based products within the specified radius of coal thermal stations, **and which imposes documentation on what is lifted, from whom and under what agreement.**
- **Boilers Act registration and periodic inspection for the steam boiler; statutory pressure-vessel certification and inspection for the autoclaves — the two assets in this plant capable of killing somebody, and the two where a deferred inspection is not a paperwork risk.**
- **Factories Act registration with safety, shift and welfare obligations; high-tension electrical sanction and DG consent; fire safety.**
- **EPF and ESI across a workforce with a large yard and handling component;** contract-labour compliance where handling is outsourced.
- **GST with input credit and e-way bills on despatch; commercial vehicle permits and driver compliance for delivery.**
- **Where clay-brick products are traded alongside — not modelled here — topsoil restrictions, kiln emission norms, mandated zig-zag conversion and seasonal airshed closure orders apply, and are among the reasons this plan does not model them.**

10. Organisation & Manpower Plan

Role	Yr 1	Yr 2	Yr 3
Promoter / plant head	1	1	2

Production operators (batching, casting, cutting)	12	16	22
Curing yard, handling & forklift	8	11	15
Autoclave & boiler operators	6	8	10
Maintenance (plant, boiler, moulds)	5	7	10
Technical sales & mason training	4	6	9
Dispatch & logistics	3	4	6
Accounts, credit control & admin	3	4	6
QC / laboratory (reporting to the promoter, not to production)	2	3	4
Total	44	60	84

Two allocations are the plan's argument in staffing form. Four people in technical sales and mason training in a forty-four-person plant is unusual for a commodity manufacturer and is the correct response to a product that is bought on the wrong unit and laid by people who were never taught how — this function sells arithmetic and prevents the site failures that would otherwise be attributed to the product. And the laboratory reports to the promoter rather than to production, for the reason applied throughout this library to cancellation authority, credit limits, stock ageing and concrete cube results: a control that reports to the party it constrains is not a control — and here the constrained party is the one whose output target is met by releasing the yard.

11. Implementation Timeline & Milestones

Phase	Timeline	Milestone
Setup	Month 0–8	Land acquired with curing yard sized for cure period plus forecast error, SPCB consents obtained, plant erected and commissioned, boiler and autoclaves registered and certified, fly-ash supply agreements signed with identified stations, BIS licence obtained before commercial dispatch, dispatch-block-by-batch-age configured in the system before first sale
Launch	Month 8–12	32,000 m³, ₹14.08cr turnover, ₹1.32cr loss; utilisation 42.7% against 56.2% break-even; under-filled charges 22%; early dispatches 7.4%
Build	Year 2	44,000 m³; utilisation 58.7% — just above break-even; early dispatches 1.2%; m² quoting 61%; 340 masons trained; ₹20.24cr turnover, ₹14L profit
Scale	Year 3	58,000 m³; utilisation 77.3%; ₹27.84cr turnover, ₹2.20cr profit; early dispatches zero; under-filled charges 3%; m² quoting 92%; 890 masons trained; conformity 99.6%; receivables 54 days

12. Financial Plan (Illustrative)

All figures are illustrative model assumptions for an Indian context, shown so the promoter can replace them with live rates. **Utilisation, charge filling and the unit of comparison are the levers. Price per piece is not one, because the customer is comparing it to a brick.**

12.1 Project cost & means of finance

Capital requirement	₹
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AAC plant & machinery (mixing, casting, cutting line, autoclaves, boiler)	6,80,00,000
Land, site development & curing yard	1,90,00,000
Working capital (curing stock, raw material + receivables)	1,80,00,000
Launch & initial operating losses	1,60,00,000
Moulds, trolleys, handling equipment & forklifts	90,00,000
Delivery vehicles	64,00,000
Electrical infrastructure, HT connection & DG	56,00,000
Consents, licences, legal & deposits	38,00,000
Laboratory, testing & BIS certification	22,00,000
Technology (production control, ERP, dispatch)	20,00,000
Total project cost	15,00,00,000
Promoter contribution	4,50,00,000
Term loan (plant, land & infrastructure)	8,00,00,000
Cash-credit / working-capital limit	1,50,00,000
Equipment / vehicle finance	1,00,00,000

12.2 Projected Profit & Loss (3 years)

Particulars	Year 1	Year 2	Year 3
VOLUME DESPATCHED (m³) / realisation per m³ delivered	32,000 / ₹4,400	44,000 / ₹4,600	58,000 / ₹4,800
TURNOVER (net of GST)	14,08,00,000	20,24,00,000	27,84,00,000
Materials (fly ash, cement, lime, gypsum, aluminium powder)	9,29,00,000	12,75,00,000	16,70,00,000
Gross margin	4,79,00,000	7,49,00,000	11,14,00,000
Gross margin %	34.0%	37.0%	40.0%
Fuel & power (boiler, autoclave steam, cutting, compressors)	98,00,000	1,30,00,000	1,66,00,000
Depreciation (plant, autoclaves, moulds, handling, vehicles)	96,00,000	1,00,00,000	1,08,00,000
Salaries (production, yard, sales & training, QC, admin)	88,00,000	1,10,00,000	1,42,00,000
Finance cost (term loan, equipment finance, cash credit)	88,00,000	92,00,000	96,00,000
Freight & delivery	74,00,000	1,00,00,000	1,32,00,000
Breakage, rejects & under-cured write-off	46,00,000	50,00,000	54,00,000
Plant maintenance & mould replacement	28,00,000	36,00,000	46,00,000

Land lease, curing yard & site cost	22,00,000	24,00,000	28,00,000
Marketing, mason training & site demonstration	20,00,000	28,00,000	38,00,000
Bad debt & write-offs	15,00,000	19,00,000	24,00,000
Insurance, admin & compliance	13,00,000	17,00,000	22,00,000
Testing, QC & BIS certification	10,00,000	13,00,000	17,00,000
Environmental compliance & fly-ash handling	9,00,000	11,00,000	14,00,000
Technology & subscriptions	4,00,000	5,00,000	7,00,000
Total expenses	6,11,00,000	7,35,00,000	8,94,00,000
Net profit / (loss) before tax	(1,32,00,000)	14,00,000	2,20,00,000
Net margin (on turnover)	(9.38%)	0.69%	7.90%
AVERAGE CAPITAL EMPLOYED	14,20,00,000	14,40,00,000	14,90,00,000
RETURN ON CAPITAL EMPLOYED	(9.3%)	1.0%	14.8%
CAPACITY UTILISATION (75,000 m³ nominal)	42.7%	58.7%	77.3%
BREAK-EVEN VOLUME (m³) / as % of capacity	42,200 / 56.2%	43,100 / 57.4%	45,200 / 60.3%
— the RMC plant's break-even utilisation, for comparison	~40% — this plant must run harder, because its capital stands still instead of moving		
CONTRIBUTION PER m³ / fixed cost base	₹1,297 / ₹5.47cr	₹1,502 / ₹6.47cr	₹1,721 / ₹7.78cr
AUTOCLAVE CHARGES BELOW FULL CHARGE / fuel & power per m³	22% / ₹306	9% / ₹295	3% / ₹286
BLOCKS DISPATCHED BEFORE SPECIFIED CURE	7.4%	1.2%	0%
CURING YARD STOCK AS DAYS OF PRODUCTION	31	28	26
QUOTATIONS ON INSTALLED m² / conversion where presented vs not	18% / 41% vs 12%	61% / 41% vs 12%	92% / 41% vs 12%
Masons trained (cumulative) / breakage: plant+transit+site	0 / 6.8%	340 / 4.1%	890 / 2.4%
Site breakage replaced despite customer handling	2.9%	1.8%	1.1%
Batches conforming to IS 2185 Part 3 / fly ash under documented agreements	97.1% / 62%	98.8% / 86%	99.6% / 100%
Receivable days / top-3 customer concentration	74 / 44%	62 / 33%	54 / 26%

12.3 Unit economics & break-even

- This is the manufacturing form of the vertical's return metric, as the RMC plan established: **CAPACITY UTILISATION × CONTRIBUTION PER UNIT**, with break-even utilisation stated rather than implied. Break-even is 56-60% and Year 1 runs at 42.7%, which IS the ₹1.32 crore loss. GMROI would be meaningless here for the opposite reason to RMC's — not because there is no inventory, but because the inventory is a mandatory cure period rather than a commercial choice.

- This plant breaks even at 56-60% utilisation against the concrete plant's ~40%, and the reason is the shape of the capital. RMC put 42% of project cost into a fleet that moves and 19% into plant; this puts 45% into fixed plant and 13% into land and a yard for stock to stand in. Capital that moves earns; capital that waits does not, and a higher break-even is what waiting costs.
- Contribution rises from ₹1,297 to ₹1,721 per cubic metre while delivered realisation rises only ₹400 — the balance is charge filling and fuel efficiency, so roughly half the improvement is operational rather than commercial.
- An under-filled autoclave charge costs close to a full charge's fuel, which is why under-filled charges (22% → 3%) is a control point and not an efficiency footnote.
- The installed-cost argument is worth more than any price change available to this plant: conversion runs at 41% where the square-metre comparison is presented against 12% where it is not, on the same product at the same price. Moving quoting practice from 18% to 92% is therefore a larger commercial lever than the ₹400 of realisation the plan assumes over three years.

12.4 Projected Cash Flow — Year 1 (quarterly, illustrative)

Particulars (₹)	Q1	Q2 monsoon	Q3 festive	Q4 peak
Opening balance	1,30,00,000	88,00,000	46,00,000	34,00,000
Collections from customers	2,86,00,000	2,64,00,000	3,52,00,000	3,94,00,000
Payments to suppliers, fuel, salaries, freight, interest & overheads	3,28,00,000	3,06,00,000	3,64,00,000	4,08,00,000
Closing balance	88,00,000	46,00,000	34,00,000	20,00,000

The cash characteristic of this business is that a cubic metre of output is paid for entirely before it can be sold at all, and then waits again to be collected — two separate delays stacked on each other. Fly ash, cement, lime and aluminium powder are consumed on day one; fuel is burned on day one; wages are paid on day one; and the block cannot be despatched for several weeks. Then a project customer takes fifty-four to seventy-four days to pay. So the cash cycle is the cure period plus the receivable, and the curing yard is working capital that is visible from the gate — a promoter can literally walk past his blocked money. Three consequences deserve stating. First, growth consumes cash unusually hard: every additional thousand cubic metres of annual volume requires yard stock, raw material and receivable together, which is why the cash-credit limit rather than demand determines how fast this plant can grow. Second, the monsoon quarter compresses from both ends — site walling work slows, and outdoor yard handling and stacking are harder — so collections fall while the fixed cost of a plant and a boiler continues. Third, and most dangerous, the pressure to dispatch early peaks exactly when cash is tightest, which is why the block on early dispatch is enforced in the system and not left to judgement — a control that depends on discipline will fail on the day discipline is most expensive.

12.5 Key Performance Indicators to Monitor

- The real constraint: utilisation against break-even volume; contribution per m³; autoclave charges per day and share below full charge; fuel and power per m³ of saleable output.
- Integrity: blocks dispatched before specified cure; override records; batch conformity to IS 2185 Part 3 on density, strength and shrinkage; curing yard days of stock.
- Commercial: share of quotations on installed m²; conversion where presented versus not; delivered margin by customer location after freight; receivable days; concentration.

- **The mason problem:** masons trained; site breakage by cause; breakage replaced despite customer handling; first-delivery supervision completed.
- **Supply & compliance:** fly ash under documented agreements and source variation on receipt; boiler and pressure-vessel inspection currency; SPCB consent conditions with renewal dates; dust monitoring.

13. Funding Requirement & Bankability

Total ask: **₹8.00 crore term loan, ₹1.00 crore equipment finance and a ₹1.50 crore cash-credit limit** against ₹4.50 crore promoter contribution. Four points. **First, this is a conventional project-finance proposition — 45% of cost is plant and 13% is land, both securable — but with a longer gestation than its size suggests, because commissioning, BIS licensing and the first cure cycle all precede the first rupee of revenue. Second, the working-capital assessment must include the curing yard as stock rather than treating it as work-in-progress that will convert next week: it is a mandated holding period, it is a large share of the limit, and a drawing-power calculation that ignores it will under-fund the plant into exactly the behaviour this plan is designed to prevent. Third, the diagnostic question is utilisation against break-even, not turnover — the whole economics is fixed-cost absorption, and a promoter who can state his break-even volume, his charges per day and his share of under-filled charges is running the plant, while one who quotes installed capacity and expected sales is quoting a supplier's brochure. Fourth, ask for the early-dispatch record. It is this industry's equivalent of the concrete plant's cement reconciliation: the one figure that distinguishes a plant earning its margin from utilisation from a plant earning it by releasing stock that is not ready — and the second does not appear in the accounts until it appears in somebody's wall.**

13.1 Funding utilisation

Use of funds	₹	% of total
AAC plant & machinery (mixing, casting, cutting, autoclaves, boiler)	6,80,00,000	45.3%
Land, site development & curing yard	1,90,00,000	12.7%
Working capital (curing stock, raw material + receivables)	1,80,00,000	12.0%
Launch & initial operating losses	1,60,00,000	10.7%
Moulds, trolleys, handling equipment & forklifts	90,00,000	6.0%
Delivery vehicles	64,00,000	4.3%
Electrical infrastructure, HT connection & DG	56,00,000	3.7%
Consents, licences, legal & deposits	38,00,000	2.5%
Laboratory, testing & BIS certification	22,00,000	1.5%
Technology (production control, ERP, dispatch)	20,00,000	1.3%
Total	15,00,00,000	100%

14. Risk Analysis & Mitigation

Risk	Mitigation
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The inverse of the concrete plant: the product takes too long to make	RMC COULD NOT INVENTORY ITS PRODUCT BECAUSE IT PERISHED IN NINETY MINUTES; THIS PLANT CANNOT MAKE TO ORDER BECAUSE THE CYCLE FROM SLURRY TO A BLOCK THAT MAY SAFELY GO INTO A WALL RUNS TO WEEKS. AN ORDER RECEIVED TODAY CANNOT BE PRODUCED TODAY AT ANY PRICE, SO THE PLANT RUNS ON A FORECAST RATHER THAN A QUEUE, AND THE CURING YARD IS NOT A WAREHOUSE — IT IS A BANK ACCOUNT WITH A MATURITY DATE, TWENTY-SIX TO THIRTY-ONE DAYS OF PRODUCTION STANDING STILL, PAID FOR AND EARNING NOTHING. WHERE RMC PUT 42% OF CAPITAL INTO A MOVING FLEET AND 19% INTO PLANT, THIS PUTS 45% INTO FIXED PLANT AND 13% INTO LAND FOR STOCK TO SIT ON — ONE BUSINESS'S CAPITAL IS IN MOTION AND THE OTHER'S IS STANDING STILL, WHICH IS WHY THIS PLANT BREAKS EVEN AT 56-60% UTILISATION AGAINST THE CONCRETE PLANT'S 40% → utilisation 42.7%→77.3% with break-even volume stated each year (42,200→45,200 m³); forecasting by segment rather than in aggregate so the yard holds sizes that are moving; and availability treated as a purchased capability, since THE CUSTOMER WHO NEEDS MATERIAL NOW IS THE CUSTOMER WHO IS NOT SHOPPING ON PRICE, AND RUNNING LEAN LOSES EXACTLY THE ORDERS THE PLANT MOST WANTS
Dispatching before cure — the same failure as under-cementing, in a new mechanism	A BLOCK RELEASED A WEEK EARLY LOOKS FINISHED: RIGHT SIZE, RIGHT COLOUR, STACKS AND LOADS NORMALLY. IT GOES INTO A WALL, IS PLASTERED AND PAINTED, AND MONTHS LATER THE WALL CRACKS — AT WHICH POINT THE BLOCK IS BEHIND TWO COATS OF FINISH, THE MASON BLAMES THE MATERIAL, THE MANUFACTURER BLAMES THE WORKMANSHIP AND NOBODY CAN PROVE ANYTHING. THE COMMERCIAL PULL IS WHAT MAKES IT DANGEROUS: IT HAPPENS WHEN THE YARD IS FULL, AN IMPORTANT CUSTOMER IS WAITING AND THE MONTH'S COLLECTIONS ARE SHORT — THAT IS, WHEN THE PRESSURE IS HIGHEST AND THE DECISION LOOKS SMALLEST → DISPATCH BLOCKED IN THE SYSTEM BY BATCH AGE RATHER THAN PERMITTED BY INSTRUCTION, SO RELEASING EARLY REQUIRES A RECORDED AND REVIEWED OVERRIDE RATHER THAN A PHONE CALL THAT IS NOT ; yard capacity sized for cure plus forecast error, because A PLANT THAT HAS NOT BUILT ROOM TO WAIT WILL EVENTUALLY NOT WAIT; lab reporting to the promoter and not to production; and the metric published monthly (7.4%→1.2%→0%) WITH THE HONEST ACKNOWLEDGEMENT THAT REACHING ZERO COSTS LAND, WORKING CAPITAL AND OCCASIONALLY AN ORDER, NONE OF WHICH A LESS SCRUPULOUS COMPETITOR IS PAYING FOR
The category loses on a unit the customer measures wrongly	AN AAC BLOCK COSTS SEVERAL TIMES WHAT A BRICK COSTS AND THE CUSTOMER COMPARES THOSE TWO NUMBERS. IT IS THE WRONG COMPARISON: ONE BLOCK REPLACES EIGHT OR NINE BRICKS BY VOLUME, USES A FRACTION OF THE MORTAR, NEEDS LESS PLASTER, IS LAID SEVERAL TIMES FASTER AND — AT ROUGHLY A THIRD OF THE WEIGHT — REDUCES THE DEAD LOAD THE STRUCTURE MUST CARRY. THE NUMBER THAT DECIDES THE CUSTOMER'S ACTUAL COST IS THE DELIVERED, INSTALLED COST OF A SQUARE METRE OF FINISHED WALL, AND ON THAT NUMBER THE BLOCK USUALLY WINS — SO THE CATEGORY LOSES SALES IT SHOULD WIN BECAUSE IT IS QUOTED IN A UNIT THE CUSTOMER MEASURES WRONGLY → quotations on installed m² 18%→92%, WHERE CONVERSION RUNS AT 41% AGAINST 12% ON THE SAME PRODUCT AT THE SAME PRICE — A LARGER COMMERCIAL LEVER THAN THE ₹400 OF REALISATION THIS PLAN ASSUMES OVER THREE YEARS ; four technical sales and training staff in a forty-four-person plant; specifiers approached with the dead-load and foundation arithmetic. A PROMOTER WHO CANNOT CONDUCT THAT CONVERSATION WILL DISCOUNT INSTEAD, AND DISCOUNTING A PRODUCT THAT IS ALREADY DEARER PER PIECE IS A LOSING POSITION

The most instructive competitor is the mason	A MASON WHO HAS LAID CLAY BRICK FOR TWENTY YEARS WILL HANDLE AN AAC BLOCK AS HE HANDLES A BRICK, CUT IT WITH THE WRONG TOOL, LAY IT IN THICK CEMENT MORTAR AND PRODUCE A WALL THAT PERFORMS WORSE THAN BRICK WHILE CONSUMING MORE MATERIAL — AND HE WILL THEN TELL THE CONTRACTOR THE BLOCK IS WEAK, AND HE WILL BE BELIEVED, BECAUSE HE IS THE PERSON ON SITE AND THE MANUFACTURER IS NOT. THE PRODUCT'S LARGEST REPUTATIONAL RISK IN INDIA IS NOT MANUFACTURING DEFECT; IT IS CORRECT PRODUCT LAID INCORRECTLY BY SOMEONE WHO WAS NEVER SHOWN HOW → masons trained directly, 0→340→890 cumulative, with thin-bed mortar and correct tools demonstrated ON SITE rather than in a brochure; first deliveries to each new customer supervised for unloading and stacking, SINCE MOST BREAKAGE HAPPENS AT THE HANDS OF PEOPLE WHO THINK THEY ARE HANDLING BRICK; and site breakage replaced despite being the customer's handling (2.9%→1.1%), because WINNING THE ARGUMENT ABOUT WHOSE FAULT IT WAS IS WORTH LESS THAN THE ACCOUNT, AND A BROKEN BLOCK IN A STACK IS AN ADVERTISEMENT AGAINST THE CATEGORY (total breakage 6.8%→2.4%)
The autoclave does not run half full	A CHARGE CONSUMES ESSENTIALLY THE SAME STEAM WHETHER IT IS FULL OR TWO-THIRDS FULL — THE VESSEL MUST REACH PRESSURE AND TEMPERATURE AND BE HELD THERE, AND THAT FUEL COST IS A FUNCTION OF THE VESSEL RATHER THAN OF WHAT IS INSIDE IT. A CHARGE AT SEVENTY PER CENT CAPACITY DOES NOT COST SEVENTY PER CENT, IT COSTS CLOSE TO A HUNDRED, AND THE DIFFERENCE COMES STRAIGHT OUT OF CONTRIBUTION. OUTPUT MOVES IN CHARGES RATHER THAN IN CUBIC METRES, SO THE DAILY QUESTION IS NOT "HOW MUCH CAN WE MAKE" BUT "CAN WE FILL THE NEXT CHARGE" → casting scheduled to fill charges completely with the cutting line paced to the autoclave rather than the autoclave fed by whatever the line produced (under-filled charges 22%→3%); sizes sharing a cycle cast together; AND FUEL AND POWER MEASURED PER CUBIC METRE OF SALEABLE OUTPUT RATHER THAN PER CHARGE (₹306→₹286), BECAUSE THE PER-CHARGE FIGURE LOOKS STABLE WHILE THE PER-CUBIC-METRE FIGURE IS WHERE THE LOSS ACTUALLY APPEARS
The raw material is free because nobody wants it	THIS PLANT IS BUILT ON FLY ASH — A WASTE STREAM FROM COAL POWER GENERATION THAT THE MoEFCC NOTIFICATION ACTIVELY DIRECTS INTO CONSTRUCTION MATERIALS WITHIN A DEFINED RADIUS OF THERMAL STATIONS, WHICH IS A GENUINE REGULATORY TAILWIND. IT IS ALSO A DEPENDENCY: A RAW MATERIAL THAT IS NEARLY FREE TODAY IS NEARLY FREE BECAUSE NOBODY ELSE WANTS IT, AND AS COAL GENERATION IS DISPLACED BY RENEWABLES THAT WILL CHANGE — IN AVAILABILITY FIRST AND IN PRICE AFTERWARDS. FLY ASH IS ALSO A BY-PRODUCT WHOSE CONSISTENCY IS NOBODY'S PRODUCTION TARGET, SO QUALITY VARIES BY SOURCE AND BY WEEK → supply under documented agreements with identified stations (62%→100%), multiple sources qualified rather than one relied upon, source variation tested on receipt with mix adjusted rather than assumed, and THE PLANT'S PROCESS DESIGNED TO ACCOMMODATE A RANGE OF ASH QUALITY RATHER THAN A SINGLE SPECIFICATION; cement, lime and aluminium powder contracted separately so a single input's movement is visible in the mix cost rather than absorbed
Why this plan does not model a red-brick kiln	STATED AS A POSITION RATHER THAN AN OMISSION: A RED-BRICK PLAN WRITTEN TODAY IS A PLAN WHOSE PRINCIPAL RAW MATERIAL IS AGRICULTURAL TOPSOIL, PERMANENTLY REMOVED; WHOSE TRADITIONAL FIRING TECHNOLOGY IS A RECOGNISED SOURCE OF PARTICULATE EMISSION; WHOSE OPERATING CALENDAR IN THE NCR AND OTHER AIRSHEDS IS SET BY SEASONAL CLOSURE ORDERS IT DOES NOT CONTROL; AND WHICH IS UNDER A MANDATED MIGRATION TO ZIG-ZAG FIRING IN SEVERAL STATES. RED BRICK IS MADE AND SOLD AT ENORMOUS SCALE AND THIS PLAN DOES NOT CLAIM OTHERWISE — IT STATES WHY IT IS NOT THE BUSINESS BEING FINANCED HERE → the plant is built on fly ash and autoclaved cellular concrete instead, which places the regulatory trend on the business's side rather than against it; and the competitive consequence is accepted rather than wished away — RED BRICK REMAINS THE VOLUME DEFAULT IN MOST INDIAN MARKETS AND COMPETES ALMOST ENTIRELY ON PRICE PER PIECE, WHICH IS EXACTLY THE COMPARISON THIS PLAN MUST REFRAME TO WIN

Safety, standards, freight & commercial	THE BOILER AND THE AUTOCLAVES ARE THE TWO ASSETS IN THIS PLANT CAPABLE OF KILLING AN EMPLOYEE, AND A DEFERRED STATUTORY INSPECTION ON EITHER IS NOT A PAPERWORK RISK → Boilers Act registration and pressure-vessel certification held on absolute calendars; Factories Act safety and shift obligations; SPCB consent conditions tracked with renewal dates and DUST CONTAINMENT AT FLY-ASH UNLOADING, SILOS AND CONVEYORS TREATED AS A DESIGN REQUIREMENT RATHER THAN HOUSEKEEPING. Standards: IS 2185 PART 3 ON DRY DENSITY, COMPRESSIVE STRENGTH AND DRYING SHRINKAGE, WHERE BLOCKS SUPPLIED OUTSIDE SPECIFICATION CARRY LIABILITY THAT FOLLOWS THE MATERIAL INTO A WALL (conformity 97.1%→99.6%). Commercially, UNLIKE RMC'S TIME RADIUS THIS PLANT HAS AN ORDINARY FREIGHT RADIUS THAT CAN BE CROSSED AT A PRICE — SO IT GROWS BY SELLING FURTHER RATHER THAN BY BUILDING ANOTHER PLANT, PRICING IS QUOTED DELIVERED WITH MARGIN MEASURED AFTER FREIGHT BY LOCATION, AND COMPETITION IS REGIONAL, MEANING A NEW PLANT TWO HUNDRED KILOMETRES AWAY IS A COMPETITOR IN A WAY A NEW RMC PLANT AT THAT DISTANCE WOULD NOT BE; credit limits enforced before despatch (receivables 74→54 days; concentration 44%→26%)
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15. SWOT Analysis

Strengths Full cure held and measured, enforced by system block rather than instruction; installed-cost selling that converts at 41% against 12%; mason training treated as distribution rather than marketing; BIS conformity with published test data against an unevenly certified competitor set; documented fly-ash sourcing that supports the customer's own compliance; a freight radius that can be extended rather than a physical wall.	Weaknesses Break-even at 56-60% utilisation, materially above the concrete plant's 40%, because the capital stands still; a cure period that makes the plant unable to respond to demand; twenty-six to thirty-one days of production financed in the yard; 45% of cost in single-purpose plant with limited alternative use; a product sold at a visible price premium per piece; gestation through commissioning, BIS licensing and a first cure cycle before any revenue.
Opportunities Regulatory pressure on clay-brick kilns moving volume structurally rather than commercially; the fly-ash utilisation framework directing institutional demand; high-rise dead-load and foundation savings that a designer can quantify; labour scarcity rewarding faster laying; tightening energy codes rewarding thermal performance; dealer channel for faster-paying retail volume.	Threats Uncertified low-price block makers competing on a specification they do not meet; fly-ash availability and price as coal generation is displaced; regional capacity addition anywhere within a wide freight radius; construction-cycle downturn hitting volume and collection together; a site failure caused by handling but attributed to the product; boiler or pressure-vessel incident.

16. Recommended AiSevak Tools for This Business

This plant would use AiSevak's Build Materials vertical tools in operations:

- **The real constraint: utilisation against break-even volume, contribution per m³, autoclave charges per day with fill-rate tracking, fuel and power per m³ of saleable output.**
- **Cure integrity: batch-age dispatch block with recorded override and review, curing yard days-of-stock by size and density, IS 2185 Part 3 batch test register, conformity trend reporting.**
- **Installed-cost selling: wall-cost-per-m² calculator comparing block against brick on mortar, plaster, labour and dead load; quotation-format compliance tracking; conversion analysis by whether the comparison was presented.**

- **The mason problem:** mason training register, first-delivery supervision checklist, breakage log split by plant, transit and site, replacement decisions recorded.
- **Supply & compliance:** fly-ash agreement and lifting register with source-variation test results, boiler and pressure-vessel inspection calendar, SPCB consent-condition tracker, delivered margin by customer location after freight.

17. Key Assumptions & Notes

- Bricks & blocks manufacturing: autoclaved aerated concrete and fly-ash concrete block plant supplying walling material to builders, contractors, infrastructure executors and the retail construction market from an owned plant with an attached curing yard. **Fourth plan in the build-materials vertical; second MANUFACTURING plan, deliberately built as the INVERSE of rmc-plant.**
- **△ CONVENTIONS SET HERE, EXTENDING THE MANUFACTURING SUB-MODEL: (a) THE INVERSE CONSTRAINT — RMC COULD NOT INVENTORY ITS PRODUCT BECAUSE IT PERISHED IN NINETY MINUTES; THIS PLANT CANNOT MAKE TO ORDER BECAUSE THE CYCLE RUNS TO WEEKS, SO IT RUNS ON A FORECAST AND THE CURING YARD IS A BANK ACCOUNT WITH A MATURITY DATE. (b) CAPITAL THAT MOVES EARNS AND CAPITAL THAT WAITS DOES NOT — RMC PUT 42% INTO A FLEET AND 19% INTO PLANT; THIS PUTS 45% INTO PLANT AND 13% INTO LAND FOR STOCK TO STAND ON, WHICH IS WHY BREAK-EVEN IS 56-60% AGAINST RMC'S 40%. (c) DISPATCHING BEFORE CURE IS THE SAME FAILURE AS UNDER-CEMENTING IN A NEW MECHANISM, AND MUST BE BLOCKED BY SYSTEM RATHER THAN BY INSTRUCTION BECAUSE THE PRESSURE PEAKS EXACTLY WHEN CASH IS TIGHTEST. (d) THE CATEGORY LOSES ON A UNIT THE CUSTOMER MEASURES WRONGLY — QUOTE INSTALLED COST PER SQUARE METRE OF WALL, NOT PRICE PER PIECE. (e) THE MOST INSTRUCTIVE COMPETITOR IS THE MASON, AND CORRECT PRODUCT LAID INCORRECTLY IS THE CATEGORY'S LARGEST REPUTATIONAL RISK. (f) THE AUTOCLAVE DOES NOT RUN HALF FULL — OUTPUT MOVES IN CHARGES, NOT IN CUBIC METRES.**
- **□ ON THE VERTICAL'S RETURN METRIC: THIS PLAN USES THE MANUFACTURING FORM THE RMC PLAN ESTABLISHED — CAPACITY UTILISATION × CONTRIBUTION PER UNIT, WITH BREAK-EVEN UTILISATION STATED RATHER THAN IMPLIED (56-60% AGAINST YEAR-1'S 42.7%, WHICH IS THE ₹1.32 CRORE LOSS). GMROI IS MEANINGLESS HERE FOR THE OPPOSITE REASON TO RMC'S: NOT BECAUSE THERE IS NO INVENTORY, BUT BECAUSE THE INVENTORY IS A MANDATORY CURE PERIOD RATHER THAN A COMMERCIAL CHOICE. TRADING AND RETAIL PLANS IN THIS VERTICAL KEEP GMROI.**
- **△ ON WHY NO RED-BRICK KILN IS MODELLED — A POSITION, NOT AN OMISSION: ITS PRINCIPAL RAW MATERIAL IS AGRICULTURAL TOPSOIL, PERMANENTLY REMOVED; ITS TRADITIONAL FIRING TECHNOLOGY IS A RECOGNISED PARTICULATE SOURCE; ITS OPERATING CALENDAR IN THE NCR AND OTHER AIRSHEDS IS SET BY SEASONAL CLOSURE ORDERS IT DOES NOT CONTROL; AND IT IS UNDER MANDATED MIGRATION TO ZIG-ZAG FIRING IN SEVERAL STATES. RED BRICK IS MADE AND SOLD AT ENORMOUS SCALE AND THE PLAN DOES NOT CLAIM OTHERWISE — IT STATES WHY IT IS NOT THE BUSINESS BEING FINANCED. THE FLY-ASH DEPENDENCY IS NAMED WITH EQUAL HONESTY: A RAW MATERIAL THAT IS NEARLY FREE TODAY IS NEARLY FREE BECAUSE NOBODY ELSE WANTS IT, AND AS COAL GENERATION IS DISPLACED THAT WILL CHANGE.**
- **Economics & cash — THE CASH CYCLE IS THE CURE PERIOD PLUS THE RECEIVABLE, TWO DELAYS STACKED, AND THE CURING YARD IS WORKING CAPITAL VISIBLE FROM THE GATE — A PROMOTER CAN LITERALLY WALK PAST HIS BLOCKED MONEY (Y1 –₹1.32cr → Y3 ₹2.20cr; net margin –9.38%→7.90%; gross margin 34.0%→40.0%; ROCE (9.3%)→1.0%→14.8%; volume 32,000→58,000 m³ at ₹4,400→₹4,800 delivered; utilisation 42.7%→77.3% against 56.2%→60.3% break-even; contribution ₹1,297→₹1,721 with roughly half the gain from charge filling and fuel rather than price; receivables 74→54 days; break-even Year 2). Regulatory: BIS/IS 2185 PART 3 ON DENSITY, STRENGTH AND SHRINKAGE; SPCB consents with DUST CONTAINMENT AS A DESIGN REQUIREMENT RATHER THAN HOUSEKEEPING; the MoEFCC FLY-ASH UTILISATION NOTIFICATION as both supply framework and**

demand mandate, with documentation on what is lifted and from whom; **BOILERS ACT REGISTRATION AND PRESSURE-VESSEL CERTIFICATION FOR THE AUTOCLAVES — THE TWO ASSETS CAPABLE OF KILLING AN EMPLOYEE, WHERE A DEFERRED INSPECTION IS NOT A PAPERWORK RISK**; Factories Act, HT sanction, fire safety, EPF/ESI and contract-labour compliance; GST and e-way bills. Lender note: **A CONVENTIONAL PROJECT-FINANCE PROPOSITION WITH A LONGER GESTATION THAN ITS SIZE SUGGESTS, SINCE COMMISSIONING, BIS LICENSING AND THE FIRST CURE CYCLE ALL PRECEDE THE FIRST RUPEE OF REVENUE; THE WORKING-CAPITAL ASSESSMENT MUST TREAT THE CURING YARD AS STOCK RATHER THAN AS WORK-IN-PROGRESS THAT CONVERTS NEXT WEEK — IT IS A MANDATED HOLDING PERIOD, AND A DRAWING-POWER CALCULATION THAT IGNORES IT WILL UNDER-FUND THE PLANT INTO EXACTLY THE BEHAVIOUR THIS PLAN IS DESIGNED TO PREVENT; THE DIAGNOSTIC QUESTION IS UTILISATION AGAINST BREAK-EVEN, NOT TURNOVER — A PROMOTER WHO CAN STATE HIS BREAK-EVEN VOLUME, HIS CHARGES PER DAY AND HIS SHARE OF UNDER-FILLED CHARGES IS RUNNING THE PLANT; ONE WHO QUOTES INSTALLED CAPACITY AND EXPECTED SALES IS QUOTING A SUPPLIER'S BROCHURE; and ASK FOR THE EARLY-DISPATCH RECORD, THIS INDUSTRY'S EQUIVALENT OF THE CONCRETE PLANT'S CEMENT RECONCILIATION — THE ONE FIGURE THAT DISTINGUISHES A PLANT EARNING ITS MARGIN FROM UTILISATION FROM ONE EARNING IT BY RELEASING STOCK THAT IS NOT READY, AND THE SECOND DOES NOT APPEAR IN THE ACCOUNTS UNTIL IT APPEARS IN SOMEBODY'S WALL.** ₹15.00cr, volume 32,000→58,000 m³, turnover 14.08→27.84cr, 44→84 staff, utilisation 42.7%→77.3%, ROCE (9.3%)→14.8%. Figures illustrative, exclude GST.

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