



BUSINESS PLAN · INDIA

Aggregate and Sand Supply

The principal competitor is committing a crime

BUILD MATERIALS

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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 an **Aggregate & Sand Supply Business** in India — a licensed stone quarry with a crushing and screening plant producing coarse aggregate and manufactured sand, supported by a tipper fleet and a small, declining trade in river sand bought only from verified lease-holders, supplying RMC plants, builders, contractors and infrastructure executors.

This is the one business in this vertical whose principal competitor is committing a crime, and a plan that does not say so is not describing the industry. Illegal sand and aggregate extraction in India is extensive, is associated in several states with organised criminality and with attacks on officials and journalists, and is the reason this sector carries the reputation it does. This plan is built entirely on licensed lease, paid royalty, approved mining plan and permit-documented despatch — not as a compliance posture but because the alternative is not a commercial compromise, it is entering that world. An operator who takes material from an undocumented source has not saved a cost; he has acquired a counterparty he cannot refuse later. The plan therefore does the thing such plans usually avoid: it states the size of the illegal operator's advantage rather than pretending he does not exist. Royalty, District Mineral Foundation contribution and transit levies come to ₹105 to ₹120 a tonne — between eighteen and twenty-one per cent of ex-quarry realisation — and that, plus the restoration he will never fund, is the whole of his cost advantage. It is not efficiency. It is the bill he is not paying.

Having stated it, the plan must answer it, because "we are legal" is a position and not a strategy — and three answers carry this business. First, a growing share of the market cannot buy from him at all: government and PSU work, listed contractors under audit, developers under lender and ESG scrutiny, and — established in this library's own RMC plan — concrete producers who must document the source of every aggregate they batch because they inherit their supplier's licensing exposure. A buyer with an audit trail cannot buy from a supplier without one, and this plan takes customers of that kind from 34% to 61% of turnover. Second, continuity: an unlicensed operation is interrupted by seizures, impoundment, court direction and crackdowns, so it can promise material today and not next month — and for a project on a programme, supply that does not stop is worth more than a discount that might. Third, and structurally the most important, the plan does not compete for the contested resource at all.

That third answer is the strategic core: this business grows in manufactured sand and shrinks in river sand, deliberately. River sand is scarce, licence-rationed, environmentally contested, banned outright during monsoon across most of India, and priced accordingly — and every one of those features is a reason to reduce dependence on it rather than to chase it. Manufactured sand is crushed from the same rock this quarry already blasts, under the same lease and the same consent, is recognised in IS 383, has no closed season, and its supply is limited by a crusher the promoter owns rather than by a permit somebody else issues. This plan moves M-sand from 27% to 41% of own production and river sand from 30% to 13% of turnover. The monsoon ban that shuts the river is itself the business case for the machine.

And the fourth is the vertical's integrity pattern in its most physically dangerous form. The concrete plant could put less cement in the mix; the block plant could dispatch before cure; the panel dealer could sell a nineteen-millimetre sheet at seventeen and a half. Here the shortcut is to overload the tipper — more tonnes per trip, immediately profitable, invisible on the delivery note, and paid for later in road damage, brake failure and, on a hill road with a full load, in somebody's death. Overloading is endemic in this trade and it is treated as a haulage economy rather than as what it is. This plan takes loads despatched within permitted axle weight

from 74% to 100% and vehicle detentions and load seizures from seven a year to none, and accepts the arithmetic that follows: **legal loading means more trips for the same tonnage, which is a real cost carried in the fleet line rather than a saving claimed in the narrative.**

This plan models an operation requiring **₹15.60 crore** (₹4.60 crore promoter + ₹5.40 crore term loan + ₹4.20 crore equipment finance + ₹1.40 crore cash-credit limit), moving from **₹10.52 crore turnover and a ₹1.58 crore loss** to **₹26.19 crore turnover and ₹2.42 crore profit** by Year 3, with despatch volume rising from 1.60 lakh tonnes to 4.00 lakh against a break-even that rises from 2.27 lakh to 3.07 lakh. (Licensed aggregate quarry, manufactured sand and permitted river-sand trade — figures illustrative.)

2. Business Description, Vision & Legal Structure

Concept: A licensed quarry and crushing operation run on documented despatch, legal loading and a deliberate migration from river sand to manufactured sand.

Vision: To be the supplier a contractor can name in an audit.

Mission: Pay the royalty and say what it costs; document every load before it moves; load to the permitted weight and price the extra trips; extract inside the boundary and the depth and prove it by survey; and fund the restoration while the quarry is still earning.

Legal structure options

- **Private Limited** — effectively required: a quarry lease, an approved mining plan, environmental clearance, explosives licensing and ₹9.60 crore of secured borrowing do not sit in any other form, and institutional customers will not onboard a supplier they cannot diligence.
- **LLP** — possible where two or three promoters combine capital and lease access, but weaker for equipment finance and for public-sector empanelment.
- **Proprietorship** — inappropriate here, and specifically so: **the statutory liabilities in mining, blasting and heavy haulage are personal and criminal as well as commercial, and this is not a sector in which to hold them unlimited.**

Regulatory anchor: the heaviest in this vertical, and the compliance load is the business rather than an overhead on it. **The MMDR Act and the state Minor Mineral Concession Rules govern the quarry lease, the approved mining plan and the permitted depth and boundary; District Mineral Foundation contribution is payable alongside royalty. Environmental clearance is required for minor minerals under the sustainable sand mining and enforcement frameworks, informed by the District Survey Report, and for sand it is assessed against replenishment rather than against reserves — a distinction that decides how much may lawfully be taken and is routinely ignored by those who take more. SPCB consent to establish and to operate for the crusher, where dust is the standard ground for a closure notice rather than a fine. The Explosives Act and Rules for drilling and blasting, with a magazine licence and a licensed blaster on site, and Mines Act and metalliferous mines safety obligations including statutory qualification of supervisory staff.** Then, set out in full at section 9: **per-load transit permits with GPS and calibrated weighbridge — a documentation regime that is not paperwork but the operating system;** axle-weight limits; forest, wildlife and CRZ clearances where the lease touches them; **NGT directions and state seasonal bans on river-bed extraction, which are a hard stop rather than a slowdown;** an approved mine closure and restoration plan; GST with e-way bills; and EPF, ESI and BOCW obligations.

3. Promoter & Ownership

Led by a promoter with quarrying, civil contracting or heavy-haulage background. Three competences decide outcomes, and the first is unusual in this library. *The willingness to be the more expensive supplier and to explain why*, because a legal operator's landed cost is genuinely higher and a promoter who cannot hold that conversation will start buying undocumented material within a year of opening. *Fleet and cycle discipline*, since this is a haulage business attached to a crusher — freight is the largest single cost line and the economic radius is tight on a material worth a few hundred rupees a tonne. And *survey and boundary discipline*, which sounds administrative and is not: extraction beyond the permitted depth or outside the leased boundary is the single most common way a licensed operator becomes an illegal one without ever deciding to. Ownership, equity & investor terms are editable inputs.

4. Market Analysis — India

Aggregate and sand are the highest-volume construction inputs in India and among the lowest in value per tonne, which makes this a logistics business with an extraction licence attached — and a market in which legality, not capacity, is the scarce factor on the sand side.

Demand drivers

- **Ready-mixed concrete plants**, the anchor customer and the one most obliged to document its aggregate source.
- **Infrastructure work** — roads, metro, bridges, drainage — high volume, specification-led and audited.
- **Residential and commercial construction**, the broad base, cyclical and credit-hungry.
- **Block, paver and precast manufacturers**, steady industrial offtake on specification.
- **River-sand scarcity and regulation**, which is converting demand toward manufactured sand structurally rather than commercially.
- **Individual house construction**, small loads, cash, and the least documented segment.

Market sizing (illustrative framing)

Layer	Definition	Indicative scale
TAM	Aggregate and sand consumed in the district	Construction-activity defined
SAM	Volume within an economic freight radius — a COST boundary, crossable at a price	Freight-bounded, unlike RMC's time radius
SOM (Yr 1-3)	Tonnage × contribution, constrained by crusher and fleet	1.60 → 4.00 lakh t; documented-customer share 34% → 61%

The most consequential thing to understand about this market is that the sand side of it is rationed by permission rather than by geology, and that has an effect on price which is frequently mistaken for an opportunity. River sand sells at roughly twice the price of crushed aggregate not because it is twice as costly to produce but because lawful supply is capped by lease grants, replenishment-based clearances and seasonal bans — and the gap between that capped legal supply and undiminished demand is precisely the space illegal extraction occupies. A new entrant looking at the river-sand margin is looking at a scarcity rent that exists because most of the demand cannot be met legally, and the obvious way to capture more of it is the way this plan refuses. Three consequences shape the strategy: **the river-sand trade is treated as a service to existing customers rather than a growth engine, bought only from lessees verified and re-verified quarterly and allowed to fall from 30% to 13% of turnover; growth is placed in manufactured sand, where supply is limited**

by a crusher the promoter owns rather than by a permit somebody else issues — the single most important structural decision in this plan; and aggregate itself, a conventional industrial minor-mineral business with a conventional licence regime, is the stable base on which the rest is built.

5. Competition & Competitive Advantage

Landscape: other licensed quarries and crushers in the district, competing conventionally on delivered price and reliability; **unlicensed and over-extracting operators whose cost base excludes royalty, restoration and legal loading** captive quarries operated by large infrastructure contractors for their own projects; traders who buy and resell without extracting; and **manufactured-sand capacity being added by other crusher owners, which is a real and growing competitive threat and also a validation of this plan's direction.** Aggregate of a given grading is a specified commodity, so competition on the legal side runs on delivered price, consistency of grading and supply reliability — and on the illegal side it does not run on anything except the bill nobody is paying.

The business's edge

- **A complete document set with every load**, which is what an audited customer actually buys.
- **Supply that does not stop**, because nothing about it depends on not being noticed.
- **Manufactured sand under the promoter's own lease**, with no closed season and no third-party permit.
- **Consistent grading from controlled crushing**, which matters to an RMC plant more than price does.
- **Legal axle loading**, which removes detention risk from the customer's schedule as well as the operator's.
- **Verified lessee sourcing** on the river sand that is still traded.

The honest competitive question in this business is not how to beat the illegal operator on price — it cannot be done — but which customers are unavailable to him, and the answer is more encouraging than it first appears. An RMC plant supplying a listed developer must be able to show where its aggregate came from, because its own customer's auditors will ask and because, as this library's concrete plan put it, the plant inherits its supplier's licensing exposure. A road contractor billing a government client cannot support a running-account bill with material he cannot evidence. A developer borrowing from an institution with environmental covenants has undertakings that reach down his supply chain. None of these buyers is choosing legality out of principle; they are choosing it because their own paperwork requires it, which makes it a durable commercial preference rather than a sentimental one. Three implications: **customer selection IS the strategy**, so the audited segment grows from 34% to 61% of turnover and the undocumented cash segment is residual volume rather than a base; reliability is priced rather than given away, since a supplier who has never had a load seized is selling schedule certainty; and the price-led customer buying undocumented material at a discount is a declined risk rather than a lost sale — the same customer will, if a consignment is ever traced, name whoever invoiced him.

6. Products, Royalty & the Migration to Manufactured Sand

Product / element	Character	Economics
Coarse aggregate (crushed stone, graded)	The stable industrial base	54-58% of volume; ₹560 → ₹590/t delivered
MANUFACTURED SAND (M-sand, IS 383)	Own lease, own crusher, no closed season	27% → 41% of own production; ₹620 → ₹655/t
River sand (bought from verified lessees)	Scarcity-priced, monsoon-banned, deliberately shrinking	30% → 13% of turnover; ₹980 → ₹1,090/t

RMC plants & precast manufacturers	Specification-led, documented, repeat	The anchor; must evidence source
Infrastructure & government contractors	Audited, slow-paying, reliable	Cannot buy undocumented material
Royalty, DMF & transit levies	The illegal operator's entire cost advantage	₹105 → ₹120/t = 18-21% of ex-quarry realisation
Loads despatched with a complete permit set	Not paperwork — the operating system	91% → 98% → 100%
Loads within permitted axle weight	The shortcut that is paid for on the road	74% → 90% → 100%

Manufactured sand deserves to be argued rather than asserted, because it is this plan's answer to the question the sector cannot otherwise answer, and because the objections to it are real. M-sand is produced by crushing and shaping the same rock this quarry already extracts, using a vertical-shaft impactor downstream of the existing crushing circuit — so the raw material, the lease, the environmental consent and the site are already paid for, and the incremental capital is a machine rather than a permission. It is recognised in IS 383 for concrete, it has no monsoon closed season, its grading is controlled rather than found, and its supply is limited by equipment the promoter owns instead of by a lease grant somebody else awards. Against a resource that is licence-rationed, seasonally banned and criminally contested, that combination is not a marginal improvement; it is a different business. The objections are stated honestly: **M-sand needs more water and admixture than well-graded river sand, and poorly produced M-sand with excessive fines or angular particle shape genuinely does make harsher concrete — which is why the category earned a poor early reputation and why some of that resistance is deserved rather than merely conservative. The answer is production control — shaping, washing where required, fines to specification and grading tested by batch — because a plant that sells crusher dust as manufactured sand is doing to this category what the untested mill did to plywood, and will earn the same distrust.**

7. Go-to-Market — the Audited Customer and the Document Set

Acquisition

- **RMC plants**, the anchor segment — specification-led, high volume, and obliged to evidence source.
- **Infrastructure and government contractors**, reached through empanelment and documentation rather than through relationship alone.
- **Builders under institutional lending**, whose covenants reach into the supply chain.
- **Block, paver and precast manufacturers**, steady industrial offtake on grading consistency.
- **M-sand trials with contractors and masons**, which is a technical sale rather than a price one.

Retention

- **Grading consistency batch to batch**, which an RMC plant values above price because its own mix design depends on it.
- **Supply that continues through a crackdown**, which is when loyalty is actually decided.
- **Documentation delivered without being chased**, since the customer's auditor will ask months later.
- **Scheduled delivery**, because a stalled pour costs the customer far more than the material.

The mason's resistance to manufactured sand is the same problem the block plant met and it must be handled the same way, because it is the single largest obstacle to this plan's strategic shift. A mason who has used river sand for twenty years will find M-sand harsher to work, will add water to compensate — which is exactly the wrong response, since it raises the water-cement ratio and weakens the concrete — and will then report that the material is inferior. He will be believed, because he is on site and the quarry is not. As with the block, correct product used incorrectly is the category's largest reputational risk, and the manufacturer cannot win that argument after the fact. This plan therefore treats technical support as distribution rather than marketing: trial batches judged on cube results rather than on feel, since the objection is subjective and the evidence is not; mix-design guidance issued — admixture rather than water, and the honest statement that M-sand behaves differently and must be used differently rather than the claim that it behaves identically; and grading and fines tested by batch with results issued, because the fastest way to lose this argument permanently is to supply one consignment of under-shaped material to a contractor who was already sceptical.

8. Operations Plan (extract, crush, weigh, document, haul, restore)

- **Extraction:** drilling and blasting under a licensed blaster with magazine control, **worked strictly inside the approved mining plan's boundary and bench depth, since extraction beyond either is the commonest way a licensed operator becomes an illegal one without deciding to.**
- **Survey:** quarterly boundary and depth survey against the approved plan, with deviations reported and corrected rather than absorbed — moving from two surveys a year to four, and boundary or depth deviations from three to none.
- **Crushing & screening:** circuit run to grading specification with the VSI producing M-sand to IS 383, **fines and particle shape controlled rather than accepted, because crusher dust sold as manufactured sand destroys the category's credibility and eventually the plant's.**
- **Weighing:** calibrated weighbridge with verification recorded, **every load weighed rather than estimated — this is both a royalty computation and a customer-dispute control.**
- **Documentation:** transit pass or mineral despatch permit, weighbridge slip and e-way bill issued together before the vehicle moves, with GPS tracking active — a load leaving without the complete set is a seized vehicle, a seized consignment and, in several states, an arrested driver.
- **Loading discipline:** vehicles loaded to permitted axle weight and the weighbridge used to enforce it rather than to record the excess — 74% to 100%.
- **River-sand sourcing:** purchased only from lessees whose lease, permit validity and despatch entitlement are verified on file and re-verified quarterly, since a lease that was valid last year is not evidence of anything this year.
- **Haulage:** cycle time and tonne-km tracked by route and by hour; **the fleet is the largest cost line and the tightest constraint on a material worth a few hundred rupees a tonne.**
- **Dust & environment:** suppression at crusher, transfer points and haul roads, with ambient monitoring against consent conditions — **dust is the standard ground for a closure notice, which stops the business rather than fining it.**
- **Restoration:** closure and restoration funded progressively while the quarry is earning, rather than left as an obligation to be discovered at the end of the lease.
- **Credit:** limits enforced before despatch, inheriting the vertical's discipline in full.

Control points

Area	Activity	Control point
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The real constraint	Despatch volume against break-even volume	1.60 → 4.00 lakh t against 2.27 → 3.07 lakh
Legality, evidenced	Loads with a complete permit set / detentions & seizures per year	91% → 100% / 7 → 0
The dangerous shortcut	Loads within permitted axle weight	74% → 90% → 100%
Becoming illegal by drift	Quarterly boundary & depth surveys / deviations found	2/4 → 4/4 per year / 3 → 0
The strategic migration	M-sand share of own production / river sand share of turnover	27% → 41% / 30% → 13%
The market he cannot reach	Customers requiring documented source, as % of turnover	34% → 48% → 61%
The cost he does not pay	Royalty, DMF & levies per tonne / as % of ex-quarry realisation	₹105 → ₹120 / 18-21%
Environment & sourcing	Restoration fund vs committed closure cost · dust within consent · lessee documents re-verified	22% → 68% · 88% → 100% · 0% → 100%

Overloading is the shortcut this business is most tempted by and it belongs in the same family as the three the earlier plans identified, with one difference that should be stated without drama. Under-cementing concrete produces a weaker structure; dispatching an uncured block produces a cracked wall; supplying a thin plywood sheet produces a customer who paid for material he did not receive. Overloading a tipper produces all of the usual consequences — accelerated road damage borne by the public, suspension and brake wear borne by the operator, detention risk borne by the customer's schedule — and one that the others do not: an overloaded vehicle on a gradient does not stop the way its brakes were designed to, and the people it does not stop for are not party to the transaction. The economics are the reason it persists: a tipper carrying twenty per cent more per trip does twenty per cent fewer trips, and on a material worth a few hundred rupees a tonne where freight is the largest cost line, that is a material margin. Which means legal loading is not free and this plan does not pretend it is — the fleet line carries the extra trips, and the fleet is sized for them. The controls are physical: the weighbridge used to prevent an overloaded despatch rather than to record it, blocked before the vehicle leaves; driver incentives on trips completed within weight rather than tonnage moved, since a driver paid by the tonne has been given a reason to overload; and the figure reported monthly alongside detentions, because a fleet at 74% compliance is not nearly compliant — it is one check post away from losing a vehicle for a fortnight.

9. Mining, Environmental & Transport Compliance (India)

- **MMDR Act and state Minor Mineral Concession Rules** — quarry lease, approved mining plan, permitted boundary and bench depth; **District Mineral Foundation contribution payable alongside royalty.**
- **Environmental clearance for minor minerals** under the sustainable sand mining and enforcement frameworks, informed by the **District Survey Report** — and for sand, assessed against replenishment rather than reserves, which decides how much may lawfully be taken and is precisely what over-extraction ignores.
- **SPCB consent to establish and to operate** for the crushing plant, where dust is the standard ground for a closure notice rather than a fine — a risk that stops the business instead of costing it money.

- **Explosives Act and Rules with magazine licence and a licensed blaster, Mines Act and metalliferous mines safety obligations including statutory qualification of supervisory staff.**
- **e-transit passes or mineral despatch permits issued per load, GPS tracking and calibrated weighbridge records — a tipper stopped without a valid permit is a seized vehicle and a seized load, and in several states an arrested driver.**
- **Motor Vehicles Act axle-weight limits**, breached routinely across the trade and enforced absolutely here.
- **NGT directions and state seasonal bans on river-bed extraction**, which are a hard stop rather than a slowdown; forest, wildlife and CRZ clearances where the lease touches them.
- **Approved mine closure and restoration plan, funded progressively**; GST with e-way bills; EPF, ESI and BOCW obligations.

10. Organisation & Manpower Plan

Role	Yr 1	Yr 2	Yr 3
Promoter / site head	1	1	2
Permits, weighbridge & despatch documentation	4	5	7
Sales & customer coordination	3	4	6
Accounts, credit control & admin	3	4	6
Survey, environment & compliance	2	3	4
Blasting supervisor & licensed blaster	2	2	3
Management & staff total	15	19	28
<i>Plus operating crews carried in the fleet and plant cost lines rather than in salaries: tipper drivers 18 → 36; crusher and screening operators 8 → 15; excavator, loader and drill operators 6 → 12; maintenance 6 → 11. Total employment 53 → 102.</i>			

Two allocations carry the plan's position. Four people on permits, weighbridge and despatch documentation in a fifteen-person management team is the plan's legality position expressed as payroll — the document set has to be complete before every vehicle moves, and an operation that treats it as an afterthought will discover the gap at a check post rather than in an office. **And survey, environment and compliance reports to the promoter rather than to production**, for the reason this library has applied to cancellation authority, credit limits, stock ageing, concrete cube results, block cure enforcement, hardware range review and panel grade testing: **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 taking one more bench.**

11. Implementation Timeline & Milestones

Phase	Timeline	Milestone
Setup	Month 0–9	Lease secured with approved mining plan, environmental clearance and SPCB consents obtained before first blast, explosives magazine licensed and blaster appointed, crushing circuit with VSI erected and commissioned, weighbridge installed and calibrated, permit/weighbridge/e-way integration live and axle-weight block configured before first despatch

Launch	Month 9–12 into Yr 1	1.60 lakh t, ₹10.52cr turnover, ₹1.58cr loss against a 2.27 lakh t break-even; documented customers 34%; permit-complete despatch 91%; axle compliance 74%; 7 detentions
Build	Year 2	2.80 lakh t against 2.55 lakh break-even; M-sand 35% of own production; river sand down to 22% of turnover; axle compliance 90%; 2 detentions; ₹18.41cr turnover, ₹86L profit
Scale	Year 3	4.00 lakh t against 3.07 lakh break-even; ₹26.19cr turnover, ₹2.42cr profit; ROCE 14.9%; M-sand 41% of own production; river sand 13% of turnover; documented customers 61%; permit-complete and axle-compliant despatch 100%; zero detentions; restoration fund at 68% of committed closure cost

12. Financial Plan (Illustrative)

All figures are illustrative model assumptions for an Indian context, shown so the promoter can replace them with live rates. **Volume against break-even, fleet cycle and the M-sand migration are the levers. Price is barely one – aggregate is a specified commodity and the sand price is a scarcity rent this plan is deliberately reducing its dependence on.**

12.1 Project cost & means of finance

Capital requirement	₹
Crushing & screening plant with VSI for manufactured sand	3,80,00,000
Tipper fleet (16 vehicles)	3,20,00,000
Excavators, wheel loaders & drilling rigs	2,40,00,000
Launch, mobilisation & initial operating losses	1,50,00,000
Working capital (receivables, stockpile & stores)	1,40,00,000
Quarry lease premium, dead rent advance & statutory deposits	1,20,00,000
Site development, haul roads, weighbridge & dust suppression	96,00,000
Environmental clearance, DSR compliance, consents & legal	54,00,000
Mine restoration fund (initial provision)	36,00,000
Technology (dispatch, weighbridge, GPS, permit integration, ERP)	24,00,000
Total project cost	15,60,00,000
Term loan (plant, site & lease)	5,40,00,000
Promoter contribution	4,60,00,000
Equipment / vehicle finance (tippers, excavators, loaders)	4,20,00,000
Cash-credit / working-capital limit	1,40,00,000

12.2 Projected Profit & Loss (3 years)

Particulars	Year 1	Year 2	Year 3
DESPATCH VOLUME (tonnes) — of which own production	1,60,000 / 1,28,000	2,80,000 / 2,40,800	4,00,000 / 3,68,000

TURNOVER (net of GST)	10,52,00,000	18,41,00,000	26,19,00,000
— Coarse aggregate	5,20,00,000	9,02,00,000	12,74,00,000
— Manufactured sand	2,18,00,000	5,33,00,000	9,96,00,000
— River sand (bought from verified lessees)	3,14,00,000	4,06,00,000	3,49,00,000
Royalty, DMF contribution & transit levies	1,34,00,000	2,60,00,000	4,42,00,000
Fleet operating (diesel, tyres, maintenance, drivers)	2,26,00,000	3,95,00,000	5,64,00,000
Purchased river sand (from lessees, royalty-paid at source)	2,20,00,000	2,84,00,000	2,44,00,000
Crushing & screening operations (power, diesel, wear parts, operators)	94,00,000	1,76,00,000	2,94,00,000
Extraction — drilling, blasting, explosives & earthmoving	70,00,000	1,32,00,000	2,02,00,000
Depreciation (crusher, fleet, earthmoving, site)	1,52,00,000	1,56,00,000	1,52,00,000
Finance cost (term loan, equipment finance, cash credit)	1,06,00,000	1,06,00,000	96,00,000
Salaries (management, permits, sales, compliance, accounts)	82,00,000	1,06,00,000	1,52,00,000
Lease rent, dead rent & mine restoration provision	46,00,000	52,00,000	78,00,000
Compliance (weighbridge, GPS, permits, environmental monitoring, dust)	32,00,000	42,00,000	62,00,000
Insurance, admin & general	24,00,000	32,00,000	42,00,000
Bad debt & write-offs	16,00,000	26,00,000	36,00,000
Technology (dispatch, weighbridge, GPS, permit integration)	8,00,000	10,00,000	13,00,000
Total costs	12,10,00,000	17,77,00,000	23,77,00,000
Net profit / (loss) before tax	(1,58,00,000)	64,00,000	2,42,00,000
Net margin (on turnover)	(15.02%)	3.48%	9.24%
AVERAGE CAPITAL EMPLOYED	14,80,00,000	15,20,00,000	16,20,00,000
RETURN ON CAPITAL EMPLOYED	(10.7%)	4.2%	14.9%
BREAK-EVEN DESPATCH VOLUME (tonnes)	2,27,000	2,55,000	3,07,000
— actual volume against it	1,60,000 (70%)	2,80,000 (110%)	4,00,000 (131%)
CONTRIBUTION PER TONNE / fixed cost base	₹235 / ₹5.34cr	₹254 / ₹6.48cr	₹261 / ₹8.00cr
ROYALTY, DMF & LEVIES PER TONNE / as % of ex-quarry realisation	₹105 / 21%	₹108 / 19%	₹120 / 18%
— i.e. the whole of an unlicensed operator's cost advantage	plus the restoration he will never fund. It is not efficiency; it is the bill he is not paying		

M-SAND SHARE OF OWN PRODUCTION / river sand share of turnover	27% / 30%	35% / 22%	41% / 13%
CUSTOMERS REQUIRING DOCUMENTED SOURCE (% of turnover)	34%	48%	61%
LOADS WITH COMPLETE PERMIT SET / detentions & seizures per year	91% / 7	98% / 2	100% / 0
LOADS WITHIN PERMITTED AXLE WEIGHT	74%	90%	100%
Boundary & depth surveys completed / deviations found	2 of 4 / 3	4 of 4 / 1	4 of 4 / 0
Restoration fund vs committed closure cost / dust within consent limits	22% / 88%	44% / 96%	68% / 100%
Lessee documents re-verified quarterly · fleet t-km per vehicle/day · receivable days · top-3 share	0% · 246 · 78 · 46%	100% · 288 · 70 · 38%	100% · 324 · 62 · 31%

12.3 Unit economics & break-even

- This plan uses the manufacturing form of the vertical's return metric that the RMC plan established — volume against break-even and contribution per unit, not GMROI — because there is no meaningful inventory here to earn a return on: stockpiles turn continuously and the capital is in a crusher, a fleet and a lease.
- Year 1 despatches 1.60 lakh tonnes against a 2.27 lakh tonne break-even, and that gap IS the ₹1.58 crore loss. A quarry carrying ₹9.40 crore of plant, fleet and earthmoving cannot be profitable at 70% of break-even, and a projection showing Year-1 profit on a new lease is describing either a captive offtake commitment or an optimistic spreadsheet.
- Royalty, DMF and levies at ₹105-₹120 a tonne are 18-21% of ex-quarry realisation and, against a Year-3 contribution of ₹261 a tonne, very nearly half of what the business earns per tonne before fixed costs — which is exactly why no efficiency programme will close the gap to an unlicensed operator, and why it is closed by selling to customers he cannot reach.
- Freight is the largest single cost line at 21-22% of turnover, on a material worth a few hundred rupees a tonne — so tonne-km per vehicle per day (246 → 324) does more for this business than any price increase available to it, and legal axle loading is a real cost inside that figure rather than a free virtue.
- Break-even: Year 2. The compliance line — weighbridge, GPS, permits, environmental monitoring and dust — runs ₹32 to ₹62 lakh a year, and it is the cost of being able to sell to 61% of the plan's Year-3 turnover. Read that way it is an acquisition cost, not an overhead.

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

Particulars (₹)	Q1 pre-monsoon	Q2 monsoon ban	Q3 post-monsoon	Q4 peak
Opening balance	1,40,00,000	96,00,000	54,00,000	42,00,000
Collections from customers	2,86,00,000	2,12,00,000	2,74,00,000	2,80,00,000
Payments to suppliers, royalty, fleet, salaries, interest & overheads	3,30,00,000	2,54,00,000	2,86,00,000	2,98,00,000
Closing balance	96,00,000	54,00,000	42,00,000	24,00,000

The monsoon quarter in this business is not a slowdown, it is a legal stop on one product line, and the distinction matters because a seasonality imposed by rules behaves differently from one imposed by weather. River-bed extraction is prohibited across most Indian states through the monsoon, so the sand trade closes on a date rather than tapering — and every operator in the district knows the date, which is why stockpiles are built and prices peak in the weeks either side of it. That is the same pattern the paint store described, with one difference: there, the season was enforced by custom and could be met by ordering earlier; here it is enforced by law and cannot be met at all except by holding stock through it. Three consequences: the pre-monsoon quarter commits working capital into a stockpile that will not convert for months, so the limit is drawn hardest just before the quarter in which collections are weakest; this is the strongest operational argument for the M-sand migration, since the crusher runs while the river cannot be touched, converting a mandated three-month gap into ordinary production; and the monsoon is also when illegal extraction is most visible and most vigorously prosecuted, so a compliant operator's supply through those months is worth a premium — the clearest instance in this plan of legality being a commercial asset rather than a cost.

12.5 Key Performance Indicators to Monitor

- **The real constraint:** despatch volume against break-even volume; contribution per tonne; tonne-km per vehicle per day; fleet cycle time by route; crusher utilisation.
- **Legality, evidenced:** loads with a complete permit set before movement; detentions and seizures; loads within permitted axle weight; lessee lease and permit re-verification; weighbridge calibration currency.
- **Boundary discipline:** quarterly boundary and depth surveys completed; deviations found and corrected; extraction against approved mining-plan quantities.
- **The migration:** M-sand share of own production; river-sand share of turnover; M-sand grading, fines and particle-shape conformity; trial cube results at customer sites.
- **Environment & commercial:** restoration fund against committed closure cost; dust and ambient monitoring within consent; documented-source customers as share of turnover; receivable days; concentration.

13. Funding Requirement & Bankability

Total ask: **₹5.40 crore term loan, ₹4.20 crore equipment finance and a ₹1.40 crore cash-credit limit** against ₹4.60 crore promoter contribution. Four points. **First, the asset security is unusually good for this vertical — crushers, tippers, excavators and loaders are standard, identifiable equipment with an active secondary market, and 36% of project cost carries its own security — but the lease is not an asset a lender can realise, so the term component should be sized against the equipment and the site rather than against the mineral.** **Second, the tenure question is specific to mining and is frequently missed: the loan must amortise inside the remaining lease period with margin, because a quarry whose lease expires before its debt does has no assets left that generate anything.** **Third, the diagnostic question is volume against break-even, not turnover — the economics are pure fixed-cost absorption, and a promoter who can state his break-even tonnage, his contribution per tonne and his tonne-km per vehicle is running the operation, while one who quotes crusher rating and expected sales is quoting a supplier's specification sheet.** **Fourth, and decisive in this sector: verify the permit trail, the royalty payment record and the boundary survey before lending. An operator whose despatch documentation is complete and whose surveys are current is running a fundamentally different business from one whose volumes cannot be reconciled to his royalty receipts — and the second is not a credit risk that appears gradually in the accounts, it is one that appears as a seizure, a closure notice or a prosecution, all at once.**

13.1 Funding utilisation

Use of funds	₹	% of total
Crushing & screening plant with VSI for manufactured sand	3,80,00,000	24.4%
Tipper fleet (16 vehicles)	3,20,00,000	20.5%
Excavators, wheel loaders & drilling rigs	2,40,00,000	15.4%
Launch, mobilisation & initial operating losses	1,50,00,000	9.6%
Working capital (receivables, stockpile & stores)	1,40,00,000	9.0%
Quarry lease premium, dead rent advance & statutory deposits	1,20,00,000	7.7%
Site development, haul roads, weighbridge & dust suppression	96,00,000	6.2%
Environmental clearance, DSR compliance, consents & legal	54,00,000	3.5%
Mine restoration fund (initial provision)	36,00,000	2.3%
Technology (dispatch, weighbridge, GPS, permit integration, ERP)	24,00,000	1.4%
Total	15,60,00,000	100%

14. Risk Analysis & Mitigation

Risk	Mitigation
The principal competitor is committing a crime	ILLEGAL SAND AND AGGREGATE EXTRACTION IN INDIA IS EXTENSIVE, IS ASSOCIATED IN SEVERAL STATES WITH ORGANISED CRIMINALITY AND WITH ATTACKS ON OFFICIALS AND JOURNALISTS, AND IS THE REASON THIS SECTOR CARRIES THE REPUTATION IT DOES. AN OPERATOR WHO TAKES MATERIAL FROM AN UNDOCUMENTED SOURCE HAS NOT SAVED A COST — HE HAS ACQUIRED A COUNTERPARTY HE CANNOT REFUSE LATER. AND THE ADVANTAGE IS STATED RATHER THAN AVOIDED: ROYALTY, DMF AND TRANSIT LEVIES AT ₹105-₹120 A TONNE ARE 18-21% OF EX-QUARRY REALISATION AND VERY NEARLY HALF OF CONTRIBUTION PER TONNE — THAT, PLUS THE RESTORATION HE WILL NEVER FUND, IS THE WHOLE OF IT. IT IS NOT EFFICIENCY; IT IS THE BILL HE IS NOT PAYING → the plan built entirely on licensed lease, approved mining plan, paid royalty and permit-documented despatch; river sand bought ONLY from lessees whose lease and permit validity are on file and RE-VERIFIED QUARTERLY, since A LEASE THAT WAS VALID LAST YEAR IS NOT EVIDENCE OF ANYTHING THIS YEAR; and NO EFFICIENCY PROGRAMME CLOSES A GAP THAT SIZE — IT IS CLOSED BY SELLING TO CUSTOMERS HE CANNOT REACH, NOT BY MATCHING HIM

"We are legal" is a position, not a strategy	THE PLAN MUST ANSWER THE COST DISADVANTAGE RATHER THAN ASSERT VIRTUE. FIRST, A GROWING SHARE OF THE MARKET CANNOT BUY FROM HIM AT ALL: GOVERNMENT AND PSU WORK, LISTED CONTRACTORS UNDER AUDIT, DEVELOPERS UNDER LENDER AND ESG COVENANTS, AND RMC PLANTS THAT MUST DOCUMENT EVERY AGGREGATE SOURCE BECAUSE THE PLANT INHERITS ITS SUPPLIER'S LICENSING EXPOSURE — AND NONE OF THEM CHOOSES LEGALITY OUT OF PRINCIPLE, THEY CHOOSE IT BECAUSE THEIR OWN PAPERWORK REQUIRES IT, WHICH MAKES IT A DURABLE COMMERCIAL PREFERENCE RATHER THAN A SENTIMENTAL ONE. SECOND, CONTINUITY. THIRD, DO NOT COMPETE FOR THE CONTESTED RESOURCE AT ALL → documented-source customers 34%→61% of turnover; reliability PRICED rather than given away, since A SUPPLIER WHO HAS NEVER HAD A LOAD SEIZED IS SELLING SCHEDULE CERTAINTY; and the price-led customer buying undocumented material treated as A DECLINED RISK RATHER THAN A LOST SALE — THE SAME CUSTOMER WILL, IF A CONSIGNMENT IS EVER TRACED, NAME WHOEVER INVOICED HIM
Growth in manufactured sand, not in river sand	RIVER SAND IS SCARCE, LICENCE-RATIONED, ENVIRONMENTALLY CONTESTED, BANNED OUTRIGHT THROUGH THE MONSOON AND PRICED ACCORDINGLY — EVERY ONE OF THOSE A REASON TO REDUCE DEPENDENCE ON IT RATHER THAN CHASE IT. ITS PRICE IS A SCARCITY RENT THAT EXISTS BECAUSE MOST DEMAND CANNOT BE MET LEGALLY, AND THE OBVIOUS WAY TO CAPTURE MORE OF IT IS THE WAY THIS PLAN REFUSES. M-SAND IS CRUSHED FROM THE SAME ROCK UNDER THE SAME LEASE AND CONSENT, IS RECOGNISED IN IS 383, HAS NO CLOSED SEASON, AND IS LIMITED BY A CRUSHER THE PROMOTER OWNS RATHER THAN A PERMIT SOMEBODY ELSE ISSUES — AGAINST A LICENCE-RATIONED, SEASONALLY BANNED, CRIMINALLY CONTESTED RESOURCE THAT IS NOT A MARGINAL IMPROVEMENT, IT IS A DIFFERENT BUSINESS → M-sand 27%→41% of own production; river sand 30%→13% of turnover. The objections stated honestly: M-SAND NEEDS MORE WATER AND ADMIXTURE THAN WELL-GRADED RIVER SAND, AND POORLY PRODUCED M-SAND WITH EXCESS FINES OR ANGULAR SHAPE GENUINELY DOES MAKE HARSHER CONCRETE — WHICH IS WHY THE CATEGORY EARNED A POOR EARLY REPUTATION AND WHY SOME RESISTANCE IS DESERVED RATHER THAN MERELY CONSERVATIVE → shaping, washing, fines to specification and grading tested by batch, because A PLANT THAT SELLS CRUSHER DUST AS MANUFACTURED SAND IS DOING TO THIS CATEGORY WHAT THE UNTESTED MILL DID TO PLYWOOD, AND WILL EARN THE SAME DISTRUST
Overloading — the integrity pattern's most dangerous form	UNDER-CEMENTING PRODUCES A WEAKER STRUCTURE; AN UNCURED BLOCK PRODUCES A CRACKED WALL; A THIN PLYWOOD SHEET PRODUCES A CUSTOMER WHO PAID FOR MATERIAL HE DID NOT RECEIVE. OVERLOADING A TIPPER PRODUCES ALL THE USUAL CONSEQUENCES — ROAD DAMAGE BORNE BY THE PUBLIC, SUSPENSION AND BRAKE WEAR BORNE BY THE OPERATOR, DETENTION RISK BORNE BY THE CUSTOMER'S SCHEDULE — AND ONE THE OTHERS DO NOT: AN OVERLOADED VEHICLE ON A GRADIENT DOES NOT STOP THE WAY ITS BRAKES WERE DESIGNED TO, AND THE PEOPLE IT DOES NOT STOP FOR ARE NOT PARTY TO THE TRANSACTION. THE ECONOMICS ARE WHY IT PERSISTS: TWENTY PER CENT MORE PER TRIP IS TWENTY PER CENT FEWER TRIPS ON THE LARGEST COST LINE IN THE BUSINESS — SO LEGAL LOADING IS NOT FREE AND THIS PLAN DOES NOT PRETEND IT IS; THE FLEET LINE CARRIES THE EXTRA TRIPS AND THE FLEET IS SIZED FOR THEM → the weighbridge used to PREVENT an overloaded despatch rather than to record it, blocked before the vehicle leaves (74%→100%); DRIVER INCENTIVES ON TRIPS COMPLETED WITHIN WEIGHT RATHER THAN ON TONNAGE MOVED, SINCE A DRIVER PAID BY THE TONNE HAS BEEN GIVEN A REASON TO OVERLOAD; and the figure reported monthly with detentions, because A FLEET AT 74% COMPLIANCE IS NOT NEARLY COMPLIANT — IT IS ONE CHECK POST AWAY FROM LOSING A VEHICLE FOR A FORTNIGHT

Becoming illegal by drift rather than by decision	EXTRACTION BEYOND THE APPROVED BENCH DEPTH OR OUTSIDE THE LEASED BOUNDARY IS THE COMMONEST WAY A LICENSED OPERATOR BECOMES AN ILLEGAL ONE WITHOUT EVER DECIDING TO — IT HAPPENS A METRE AT A TIME, IN PURSUIT OF AN OUTPUT TARGET, AND IS DISCOVERED BY SOMEBODY ELSE'S SURVEY. FOR SAND, ENVIRONMENTAL CLEARANCE IS ASSESSED AGAINST REPLENISHMENT RATHER THAN RESERVES, WHICH DECIDES HOW MUCH MAY LAWFULLY BE TAKEN AND IS PRECISELY WHAT OVER-EXTRACTION IGNORES → quarterly boundary and depth survey against the approved mining plan with deviations reported and corrected rather than absorbed (surveys 2/4→4/4; deviations 3→0); SURVEY, ENVIRONMENT AND COMPLIANCE REPORTING TO THE PROMOTER RATHER THAN TO PRODUCTION, SINCE THE CONSTRAINED PARTY IS THE ONE WHOSE OUTPUT TARGET IS MET BY TAKING ONE MORE BENCH; and restoration funded PROGRESSIVELY while the quarry earns (22%→68% of committed closure cost) rather than left as an obligation to be discovered at the end of the lease
The monsoon is a legal stop, not a slowdown	RIVER-BED EXTRACTION IS PROHIBITED ACROSS MOST INDIAN STATES THROUGH THE MONSOON, SO THE SAND TRADE CLOSES ON A DATE RATHER THAN TAPERING — AND EVERY OPERATOR KNOWS THE DATE, WHICH IS WHY STOCKPILES ARE BUILT AND PRICES PEAK EITHER SIDE OF IT. THIS IS THE PAINT STORE'S SEASON-BOUGHT-IN-THE-TROUGH PATTERN WITH ONE DIFFERENCE: THERE THE SEASON WAS ENFORCED BY CUSTOM AND COULD BE MET BY ORDERING EARLIER; HERE IT IS ENFORCED BY LAW AND CANNOT BE MET AT ALL EXCEPT BY HOLDING STOCK THROUGH IT → the pre-monsoon quarter commits working capital into a stockpile that will not convert for months, so THE LIMIT IS DRAWN HARDEST JUST BEFORE THE QUARTER IN WHICH COLLECTIONS ARE WEAKEST; the M-sand migration is the operational answer, since THE CRUSHER RUNS WHILE THE RIVER CANNOT BE TOUCHED, CONVERTING A MANDATED THREE-MONTH GAP INTO ORDINARY PRODUCTION; and THE MONSOON IS ALSO WHEN ILLEGAL EXTRACTION IS MOST VISIBLE AND MOST VIGOROUSLY PROSECUTED, SO A COMPLIANT OPERATOR'S SUPPLY THROUGH THOSE MONTHS IS WORTH A PREMIUM — THE CLEAREST INSTANCE IN THIS PLAN OF LEGALITY BEING A COMMERCIAL ASSET RATHER THAN A COST
Fixed-cost absorption and a freight-dominated cost base	YEAR 1 DESPATCHES 1.60 LAKH TONNES AGAINST A 2.27 LAKH BREAK-EVEN, AND THAT GAP IS THE ₹1.58 CRORE LOSS — NOT AN EXECUTION FAILURE. A QUARRY CARRYING ₹9.40 CRORE OF PLANT, FLEET AND EARTHMOVING CANNOT BE PROFITABLE AT 70% OF BREAK-EVEN, AND A PROJECTION SHOWING YEAR-1 PROFIT ON A NEW LEASE IS DESCRIBING EITHER A CAPTIVE OFFTAKE COMMITMENT OR AN OPTIMISTIC SPREADSHEET. FREIGHT IS THE LARGEST SINGLE COST LINE AT 21-22% OF TURNOVER ON A MATERIAL WORTH A FEW HUNDRED RUPEES A TONNE → the RMC plan's manufacturing metric form used rather than GMROI, since there is no meaningful inventory to earn a return on; break-even volume stated explicitly each year (2.27→2.55→3.07 lakh t against 1.60→2.80→4.00 actual); TONNE-KM PER VEHICLE PER DAY (246→324) DOING MORE FOR THIS BUSINESS THAN ANY PRICE INCREASE AVAILABLE TO IT; and the economic radius understood as a COST boundary crossable at a price, unlike RMC's time radius which cannot be crossed at all
Dust, safety, credit & lease tenure	SPCB CONSENT CONDITIONS, WHERE DUST FROM THE CRUSHER, TRANSFER POINTS AND HAUL ROADS IS THE STANDARD GROUND FOR A CLOSURE NOTICE RATHER THAN A FINE — A RISK THAT STOPS THE BUSINESS INSTEAD OF COSTING IT MONEY → suppression, enclosure and ambient monitoring against consent (88%→100%). THE EXPLOSIVES ACT, MAGAZINE LICENCE AND A LICENSED BLASTER, PLUS MINES ACT SAFETY AND STATUTORY QUALIFICATION OF SUPERVISORY STAFF — BLASTING AND HEAVY EARTHMOVING ARE WHERE THIS BUSINESS KILLS PEOPLE IF IT IS RUN CARELESSLY. Credit limits enforced before despatch with receivables 78→62 days and concentration 46%→31%, inheriting the dealership's discipline. And a lending point specific to mining: THE LEASE IS NOT AN ASSET A LENDER CAN REALISE, AND THE LOAN MUST AMORTISE INSIDE THE REMAINING LEASE PERIOD WITH MARGIN — A QUARRY WHOSE LEASE EXPIRES BEFORE ITS DEBT DOES HAS NO ASSETS LEFT THAT GENERATE ANYTHING

15. SWOT Analysis

Strengths A complete document set with every load, which is what an audited customer actually buys; supply that does not stop because nothing about it depends on not being noticed; manufactured sand under the promoter's own lease with no closed season and no third-party permit; consistent grading from controlled crushing; standard resaleable equipment backing 36% of project cost; restoration funded while the quarry earns.	Weaknesses A cost base 18-21% higher per tonne than an unlicensed competitor's, by design; break-even at 2.27 lakh tonnes against Year-1's 1.60; freight at 21-22% of turnover on a low-value material, with a tight economic radius; a mandated three-month stop on the river-sand line; a lease that is not realisable security; heavy fixed capital in single-purpose plant.
Opportunities The audited segment growing as ESG, lender and public-procurement documentation requirements reach into supply chains; river-sand scarcity converting demand to M-sand structurally rather than commercially; RMC plants obliged to evidence aggregate source; block, paver and precast offtake on grading consistency; premium available for supply that continues through a crackdown.	Threats Unlicensed operators undercutting on a cost advantage no efficiency programme can match; a closure notice on dust, or a boundary deviation found on somebody else's survey; M-sand capacity added by other crusher owners; construction downturn hitting volume and collection together; lease renewal risk; a fatal incident in blasting or haulage.

16. Recommended AiSevak Tools for This Business

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

- **The real constraint: despatch volume against computed break-even, contribution per tonne, tonne-km per vehicle per day, fleet cycle analysis by route and hour, crusher utilisation.**
- **Legality, evidenced: permit-set completeness gate blocking despatch before movement, transit-pass and e-way-bill integration, weighbridge capture with axle-weight block, GPS trip records, detention and seizure log, lessee lease and permit re-verification register.**
- **Boundary discipline: quarterly survey scheduler against the approved mining plan, deviation log with correction tracking, extraction reconciled to royalty paid and to mining-plan quantities.**
- **The migration: M-sand production and share tracking, grading, fines and particle-shape test register against IS 383, customer trial and cube-result log, mix-design guidance issue.**
- **Environment & commercial: restoration fund accrual against committed closure cost, SPCB consent-condition and dust-monitoring tracker with renewal dates, documented-source customer share, credit limits enforced pre-despatch with ageing and concentration.**

17. Key Assumptions & Notes

- Aggregate & sand supply: licensed stone quarry with crushing and screening producing coarse aggregate and manufactured sand, a tipper fleet, and a small declining trade in river sand bought only from verified lease-holders, supplying RMC plants, builders, contractors and infrastructure executors. **Seventh plan in the build-materials vertical; EXTRACTION/LOGISTICS sub-model, using the manufacturing metric form (volume against break-even, contribution per unit) rather than GMROI.**
- **⚠ THE VERTICAL'S HARDEST HONESTY CASE, AND THE POSITION IS STATED RATHER THAN IMPLIED: ILLEGAL SAND AND AGGREGATE EXTRACTION IN INDIA IS EXTENSIVE, IS ASSOCIATED IN SEVERAL STATES**

WITH ORGANISED CRIMINALITY AND WITH ATTACKS ON OFFICIALS AND JOURNALISTS, AND IS THE REASON THE SECTOR CARRIES THE REPUTATION IT DOES. THIS PLAN IS BUILT ENTIRELY ON LICENSED LEASE, APPROVED MINING PLAN, PAID ROYALTY AND PERMIT-DOCUMENTED DESPATCH, AND IT MODELS NO ECONOMICS THAT DEPEND ON UNLICENSED MATERIAL. TAKING FROM AN UNDOCUMENTED SOURCE IS NOT A COMMERCIAL COMPROMISE — IT IS ACQUIRING A COUNTERPARTY YOU CANNOT REFUSE LATER. HIS ADVANTAGE IS QUANTIFIED RATHER THAN AVOIDED: ROYALTY, DMF AND LEVIES AT ₹105-₹120/TONNE ARE 18-21% OF EX-QUARRY REALISATION AND NEARLY HALF OF CONTRIBUTION PER TONNE — NOT EFFICIENCY, BUT THE BILL HE IS NOT PAYING — AND SINCE NO EFFICIENCY PROGRAMME CLOSING A GAP THAT SIZE, THE PLAN CLOSING IT BY SELLING TO CUSTOMERS HE CANNOT REACH.

- **△ CONVENTIONS SET HERE: (a) "WE ARE LEGAL" IS A POSITION, NOT A STRATEGY — THE THREE ANSWERS ARE THE AUDITED SEGMENT (34%→61%, WHERE GOVERNMENT, PSU, LISTED-CONTRACTOR, ESG-COVENANTED AND RMC BUYERS CANNOT PURCHASE UNDOCUMENTED MATERIAL BECAUSE THEIR OWN PAPERWORK FORBIDS IT), CONTINUITY (AN UNLICENSED OPERATION CAN PROMISE MATERIAL TODAY AND NOT NEXT MONTH), AND NOT COMPETING FOR THE CONTESTED RESOURCE AT ALL. (b) GROWTH IN MANUFACTURED SAND, NOT RIVER SAND — SAME ROCK, LEASE AND CONSENT, IS 383 RECOGNITION, NO CLOSED SEASON, SUPPLY LIMITED BY A CRUSHER THE PROMOTER OWNS RATHER THAN A PERMIT SOMEBODY ELSE ISSUES; THE MONSOON BAN THAT SHUTS THE RIVER IS ITSELF THE BUSINESS CASE FOR THE MACHINE (M-SAND 27%→41%; RIVER SAND 30%→13%). (c) OVERLOADING IS THE INTEGRITY PATTERN'S FIFTH AND MOST DANGEROUS INSTANCE, AND LEGAL LOADING IS NOT FREE — THE FLEET CARRIES THE EXTRA TRIPS. (d) BECOMING ILLEGAL BY DRIFT: EXTRACTION BEYOND BENCH DEPTH OR BOUNDARY HAPPENS A METRE AT A TIME IN PURSUIT OF AN OUTPUT TARGET, SO SURVEY REPORTS TO THE PROMOTER, NOT TO PRODUCTION. (e) THE MONSOON IS A LEGAL STOP RATHER THAN A SLOWDOWN — THE PAINT STORE'S PATTERN, BUT ENFORCED BY LAW AND UNMEETABLE EXCEPT BY HOLDING STOCK THROUGH IT.**
- **ON M-SAND'S OBJECTIONS, STATED RATHER THAN DISMISSED: IT NEEDS MORE WATER AND ADMIXTURE THAN WELL-GRADED RIVER SAND, AND POORLY PRODUCED M-SAND GENUINELY DOES MAKE HARSHER CONCRETE, SO SOME MASON RESISTANCE IS DESERVED RATHER THAN CONSERVATIVE. THE MASON PROBLEM IS THE BLOCK PLANT'S AGAIN — HE ADDS WATER, WEAKENS THE CONCRETE, REPORTS THE MATERIAL AS INFERIOR AND IS BELIEVED BECAUSE HE IS ON SITE AND THE QUARRY IS NOT → trials judged on CUBE RESULTS RATHER THAN FEEL, mix-design guidance issued, grading and fines tested by batch.**
- **Economics & cash — PURE FIXED-COST ABSORPTION WITH A FREIGHT-DOMINATED VARIABLE BASE (Y1 —₹1.58cr → Y3 ₹2.42cr; net margin —15.02%→9.24%; ROCE (10.7%)→4.2%→14.9%; volume 1.60→4.00 lakh t against break-even 2.27→3.07 lakh, AND THE YEAR-1 GAP IS THE LOSS RATHER THAN AN EXECUTION FAILURE; contribution ₹235→₹261/t; freight 21-22% of turnover; tonne-km per vehicle per day 246→324; receivables 78→62 days; break-even Year 2; THE COMPLIANCE LINE OF ₹32-62 LAKH A YEAR IS THE COST OF BEING ABLE TO SELL TO 61% OF YEAR-3 TURNOVER, WHICH READ THAT WAY IS AN ACQUISITION COST RATHER THAN AN OVERHEAD). Regulatory: MMDR ACT AND STATE MINOR MINERAL CONCESSION RULES; ENVIRONMENTAL CLEARANCE INFORMED BY THE DISTRICT SURVEY REPORT AND, FOR SAND, ASSESSED AGAINST REPLENISHMENT RATHER THAN RESERVES — THE DISTINCTION THAT DECIDES HOW MUCH MAY LAWFULLY BE TAKEN AND PRECISELY WHAT OVER-EXTRACTION IGNORES; DMF contribution; SPCB CONSENTS WHERE DUST IS THE STANDARD GROUND FOR A CLOSURE NOTICE RATHER THAN A FINE; EXPLOSIVES ACT, MAGAZINE LICENCE AND A LICENSED BLASTER, PLUS MINES ACT SAFETY AND STATUTORY QUALIFICATION OF SUPERVISORY STAFF; e-TRANSIT PASSES OR MINERAL DESPATCH PERMITS PER LOAD WITH GPS AND CALIBRATED WEIGHBRIDGE — NOT PAPERWORK BUT THE OPERATING SYSTEM, BECAUSE A TIPPER STOPPED WITHOUT A VALID PERMIT IS A SEIZED VEHICLE, A SEIZED LOAD AND IN SEVERAL STATES AN ARRESTED DRIVER; Motor Vehicles Act axle-weight limits; NGT directions and state seasonal river-bed bans; forest, wildlife and CRZ clearances**

where applicable; approved mine closure and restoration plan funded progressively; GST, e-way bills, EPF/ESI/BOCW.

Lender note: **36% OF PROJECT COST IS STANDARD RESALEABLE EQUIPMENT, BUT THE LEASE IS NOT AN ASSET A LENDER CAN REALISE, SO THE TERM COMPONENT SHOULD BE SIZED AGAINST EQUIPMENT AND SITE RATHER THAN AGAINST THE MINERAL; THE LOAN MUST AMORTISE INSIDE THE REMAINING LEASE PERIOD WITH MARGIN, BECAUSE A QUARRY WHOSE LEASE EXPIRES BEFORE ITS DEBT DOES HAS NO ASSETS LEFT THAT GENERATE ANYTHING; THE DIAGNOSTIC QUESTION IS VOLUME AGAINST BREAK-EVEN, NOT TURNOVER — A PROMOTER WHO CAN STATE HIS BREAK-EVEN TONNAGE, CONTRIBUTION PER TONNE AND TONNE-KM PER VEHICLE IS RUNNING THE OPERATION; ONE WHO QUOTES CRUSHER RATING AND EXPECTED SALES IS QUOTING A SPECIFICATION SHEET; and decisively, VERIFY THE PERMIT TRAIL, THE ROYALTY PAYMENT RECORD AND THE BOUNDARY SURVEY BEFORE LENDING — AN OPERATOR WHOSE VOLUMES CANNOT BE RECONCILED TO HIS ROYALTY RECEIPTS IS NOT A CREDIT RISK THAT APPEARS GRADUALLY IN THE ACCOUNTS; IT APPEARS AS A SEIZURE, A CLOSURE NOTICE OR A PROSECUTION, ALL AT ONCE.** ₹15.60cr, volume 1.60→4.00 lakh t, turnover 10.52→26.19cr, 53→102 total employment, M-sand 27%→41% of own production, ROCE (10.7%)→14.9%. Figures illustrative, exclude GST.

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