

CONSOLIDATED DEEP RESEARCH

UAE ASPHALT MANUFACTURING & RAP

Production, recycled asphalt, supply-and-lay and developer-backed market entry

Dubai / United Arab Emirates

Evidence consolidated 24 August 2026 | Internal investment review

DATA-INTEGRITY STANDARD

Verified public data, partner-supplied working figures, modelled assumptions and unresolved gaps are kept separate. No missing figure has been invented.

Contents

This report is organised for an investment-committee read-through. Section numbering is fixed so the contents remain usable in Word, PDF and print.

Section	Report content
1	Executive Summary
2	Research Scope and Evidence Rules
3	Market and Demand
4	Competitive Landscape
5	Strategic Entry and Partnership Models
6	RAP Strategy and Economics
7	Plant Technology, Equipment and Capacity
8	Location Strategy
9	Regulation and Licensing
10	Capital Investment
11	Operating Economics and Sensitivities
12	Operating Requirements
13	Principal Risks
14	Recommendation and Implementation Roadmap
15	Missing Information and Due-Diligence Requirements
16	Conflicting or Updated Information
17	Source Register

1. Executive Summary

INVESTMENT VERDICT CONDITIONAL GO. Proceed to a structured 60-90 day feasibility validation phase. Do not approve plant CAPEX until land use, RAP approvals, feedstock, gas access, OEM pricing, supplier quotes and anchor demand are confirmed. [R2]

The opportunity is a developer-backed asphalt production and supply-and-lay platform with a recycling-led cost and ESG angle. The underlying case does not support entering as an undifferentiated commodity supplier. It supports vertical control over internal roads, parking, access roads, logistics yards and third-party infrastructure work, with RAP as the differentiator. [R2]

The evidence base combines a 13-page public-source market landscape dated 1 June 2026 [R1] with a 32-page partner case study dated June 2026 [R2]. Public information is adequate for competitor mapping and directional demand, but not for audited UAE market share, national asphalt tonnage, current supplier pricing or final investment approval.

Decision metric	Recovered figure	Evidence status	Investment interpretation
Indicative total CAPEX	EUR 11.8M / approximately AED 47M	PARTNER-SUPPLIED WORKING FIGURE	Excludes unquoted land, finance and some working-capital uncertainty.
Plant configuration	320 t/h virgin; 380 t/h with RAP	PARTNER / OEM-CONFIGURATION ASSUMPTION	Large RAP-ready batch plant; utilisation must be validated.
Working production point	25,000 t/month	MODELLED ASSUMPTION	Below the stated 20,000-40,000 t/month operating range.
Ex-factory price	AED 235/t	PARTNER-SUPPLIED WORKING FIGURE	Requires live UAE quotes and tender evidence.
Target net margin	AED 45/t; stated as approximately 20%	MODELLED ASSUMPTION	Implies 19.1% of AED 235/t before reconciling the cost stack.
Annualised model	AED 70.5M sales; AED 13.5M net	CALCULATED FROM PROVIDED MODEL	Assumes 25,000 t/month for 12 months with no ramp-up.
Simple payback	Approximately 3.5 years	CALCULATED FROM PROVIDED MODEL	Before financing, ramp-up, land and unpriced contingencies.
RAP target	Up to 40% of production mix	TECHNICAL TARGET	Requires dedicated RAP dryer, approved mix designs and reliable feedstock.

Board Position

Proceed because the strategic logic is credible: committed road and infrastructure demand, fragmented supply, developer-controlled anchor demand, an operator with established plant and RAP experience, and a recycling route that attacks bitumen volatility. [R2]

Do not commit capital because the decisive underwriting inputs remain unverified: plant quotations, plot and gas terms, land cost, industrial and RAP approvals, UAE mix selling prices, aggregate and bitumen prices, working capital, anchor-volume LOIs and third-party offtake. [R2]

2. Research Scope and Evidence Rules

Reference	Recovered source	What it supports	Limitations
R1	Dubai / UAE Asphalt Production Landscape, 1 Jun 2026	Public-source company ranking, RAP-readiness logic, generic plant systems, cost-share ranges, Dubai demand signals and URLs.	Not a full plant investment model; most company capacity and RAP data are not public.
R2	Asphalt Alpha x Ellington UAE Asphalt & RAP Market Entry, Jun 2026	Developer-backed JV structure, plant configuration, equipment, CAPEX, operating assumptions, location, regulation, risk and roadmap.	Many financial inputs are partner-supplied benchmarks; original URLs are not preserved in the PDF.

EVIDENCE LABELS VERIFIED PUBLIC DATA = supported by a recoverable public source. PARTNER-SUPPLIED WORKING FIGURE = provided in the JV case study and not independently verified here. MODELLED ASSUMPTION = used for sensitivity or feasibility framing. CALCULATED FROM PROVIDED MODEL = arithmetic based only on recovered inputs. NOT PUBLICLY VERIFIED = a gap that must remain open.

3. Market and Demand

No reliable public figure was recovered for total UAE hot-mix asphalt production in tonnes per year. Both sources therefore use committed project pipelines, road kilometres, plant capacities, tender records and direct supplier validation as the correct demand framework. [R1][R2]

Demand programme / signal	Recovered figure	Evidence classification	Relevance
Dubai main roads plan	AED 16B; 22 projects; 2024-27; 226 km of roads and 115 bridges/tunnels stated in R2	CASE-STUDY PUBLIC-DATA SUMMARY	Direct road demand and strongest Dubai launch signal.
Dubai internal roads plan	AED 3.7B; 634 km; 2025-29	CASE-STUDY PUBLIC-DATA SUMMARY	Developer-relevant roads, parking and access works.
UAE transport and roads	AED 170B programme value	CASE-STUDY PUBLIC-DATA SUMMARY	National context; asphalt is only a fraction.
Al Maktoum International Airport	AED 128B / approximately USD 35B; ultimate 260M passengers	CASE-STUDY PUBLIC-DATA SUMMARY	Airport, access, logistics and surrounding development demand.
Wynn Al Marjan Island	USD 5.1B	CASE-STUDY PUBLIC-DATA SUMMARY	Northern Emirates node-two demand signal.
Al Khail Road upgrade	AED 700M; 3,300 m bridges; 6,820 m road enhancements	VERIFIED PUBLIC DATA IN R1	Direct road/bridge corridor demand.
Hessa Street Phase I	4.5 km corridor	VERIFIED PUBLIC DATA IN R1	Urban widening and corridor work.
Dubai-Al Ain Road	AED 2B; 17 km	VERIFIED PUBLIC DATA IN R1	Highway improvement demand.

Demand Layers and First Customers

Customer segment	First product	Priority	Commercial logic
Ellington-linked projects	Internal roads, parking and access roads	Phase 1	Anchor demand, controlled scheduling and first references.
Other developers	Supply-and-lay packages	Phase 1	Replicable private-infrastructure need.
Industrial zones	Yard paving, access roads and loading areas	Phase 1	Practical buyers and repeat surface works.
Mid-sized contractors	Asphalt supply and delivery	Phase 2	Volume without full public-sector qualification burden.
RTA-linked contractors	Supply and subcontract paving	Phase 2	Bridge into the public-road ecosystem.
Public-sector clients	Approved asphalt and roadworks	Phase 3	Requires prequalification, approved mixes and references.

SEASONALITY Plant production is described as year-round, but summer surface temperatures above 60°C compress paving into night and early-morning windows. The commercial constraint is laydown scheduling and truck logistics, not a winter shutdown. [R2]

4. Competitive Landscape

R2 characterises the UAE market as fragmented and dominated by contractor-owned captive plants. R1 is more conservative: it confirms Al Naboodah's asphalt capability but treats many other names as asphalt-adjacent unless direct plant evidence is available. The two positions are compatible only if the disclosed capacity table remains labelled as case-study evidence rather than audited market share. [R1][R2]

Named Operators and Disclosed Capacity in the JV Case Study

Company	Location	Disclosed capacity	Market focus / note
Western Banoona Group	Mussafah, Abu Dhabi	6 plants; 1,664 t/h	Abu Dhabi, GCC and India; verify current practical output.
RAD International	Dubai Industrial City; RAK	240 t/h; 2,000 t/day	RTA/DM specification; PMB, emulsion and cutback.
Fala Road Contracting	RAK Investment Park	240 t/h	Eastern and Northern Emirates.
Al Geemi Contracting	Abu Dhabi	474 t/h combined	Roads, bridges and runways.
Top Link	UAE project location	260 t/h	Ammann ABA UniBatch; project-based.
Al Futtaim Colas	Regional	1.6M t/year across UAE, Oman and Qatar	Regional asphalt and roads platform.
Wade Adams	Dubai	7,000 t/day (company figure)	Large UAE road contractor.
Al Naboodah	Dubai and Abu Dhabi	Not published	Polymer-modified asphalt specialist.
Tristar / Cosmostar	UAE	240 t/h / 160 t/h	Capacity figures require direct confirmation.

Public-Source Confidence Ranking

Rank	Company	Score	Asphalt evidence	Confidence
1	Al Naboodah Construction Group	19/25	Confirmed	High
2	Wade Adams	15/25	Road/bitumen-adjacent; plant data not public	Medium
3	Tarmac Middle East	15/25	Historical confirmation	Medium
4	Colas Middle East / Colas	15/25	Global asphalt specialist; UAE plant unconfirmed	Medium
5	Ghantoot Transport & General Contracting	13/25	Not publicly confirmed	Medium
6	NPC / Trojan Group	13/25	Not publicly confirmed	Medium
7	Al Marwan ecosystem	13/25	Equipment evidence; plant proof not found	Low-Medium
8	Dutco / DBB	12/25	Not publicly confirmed	Medium
9	Saif Bin Darwish	11/25	Candidate; verification pending	Low-Medium
10	Western Bainoona / Bin Hafeez candidates	11/25	Candidate; verification pending	Low-Medium

COMPETITIVE CONCLUSION Do not claim a definitive top producer by tonnage. Public data supports a market map, not audited market share. The strongest entry gap is credible RAP capability combined with anchor demand and supply-and-lay execution. [R1][R2]

5. Strategic Entry and Partnership Models

Term	Option A - 50/50 partnership	Option B - land and licence model
Factory cost	Split 50/50	Funded by Asphalt Alpha
Road-applying equipment	Split 50/50	Funded by Asphalt Alpha
Land	Minimum 10,000 m ² ; rent/buy cost split 50/50	Minimum 10,000 m ² provided and paid by Ellington
Contracts and permits	Jointly secured	Ellington provides work contract, permitting and electrical connection up to 2,000 A
Profit split	50/50	Ellington takes 20% of profit margin; Asphalt Alpha funds and operates the platform

Both structures assume Asphalt Alpha supplies factory design, equipment procurement, RAP implementation, training, operating structure and project management. Ellington contributes UAE market access, developer relationships, land/licensing/capital according to the chosen structure and early demand. The case study states a 1.5-year build timeline from building-permit issuance. [R2]

6. RAP Strategy and Economics

RAP is milled and processed old pavement containing aggregate and aged binder. It can replace virgin aggregate and part of the virgin bitumen requirement. The venture targets RAP use in base and binder courses, not the final wearing course. [R2]

Market / target	Recovery rate	RAP content in new mix	Evidence note
Japan	99.5%	Approximately 47%	High recovery and high mix content.
Germany	Approximately 99% reused in some form	Approximately 30-40% estimate	Mix-content figure is estimated.
United States	>99%	22-23%	National survey referenced in R2.
Qatar	>1.4M t since 2020	Approximately 15%; 15-30% by design	Practice/specification, not national average.
UAE where used	No national figure	10-25%	Permitted, not mandated; requires authority validation.
Proposed JV	Not applicable	Up to 40%	Technical target using a dedicated RAP dryer.

RAP Plant Route

RAP route	Indicative ceiling	Required equipment	Implication
Recycling collar / weigh hopper	Approximately 15-30%	Standard batch plant; no second dryer	Indirect heating; higher RAP shares overheat virgin aggregate.
Dedicated RAP dryer	30-40% continuously	Second dryer, hot-gas generator and blue-smoke capture	Supports the proposed 40% target.
High-RAP system	Up to 70%	Dedicated RAP drying line; 180-220 t/h RAP feed in the cited example	Higher technical ceiling; not the base underwriting target.

Recovered RAP claim	Figure	Classification	Required treatment
Mix-cost reduction at 50% RAP	-12.4% vs virgin baseline	CASE-STUDY SENSITIVITY	Do not apply to the 40% target without a separate calculation.
Mix-cost reduction at 70% RAP	-16.9% vs virgin baseline	CASE-STUDY SENSITIVITY	Technical high-case; outside the base target.
UAE LCA example	6.8% / 688 tCO ₂ e reduction on one 1 km section	CASE-STUDY PUBLIC-DATA SUMMARY	Specific project configuration, not universal.
30% RAP emissions saving	Approximately 3.9 kgCO ₂ e/t	CASE-STUDY PUBLIC-DATA SUMMARY	Requires source and mix validation.
Gas vs fuel oil	Approximately 25% lower CO ₂ per tonne	CASE-STUDY PUBLIC-DATA SUMMARY	Depends on plant and fuel assumptions.

POLICY BOUNDARY MoCCA Resolution No. 21 of 2019 supports recycled aggregates from construction and demolition waste, with compliant use up to 40% of material requirements. R2 correctly notes that this is not a RAP-specific approval. RTA acceptance per pavement layer remains a separate due-diligence item.

7. Plant Technology, Equipment and Capacity

System	Recovered specification	Role / rationale
Batch plant	320 t/h virgin; 380 t/h with RAP	Per-batch recipe control for standard, polymer-modified and RAP mixes.
RAP heating	Dedicated upper RAP dryer and hot-gas generator	Avoids direct firing and supports approximately 40% RAP.
Feedstock preparation	CAMS cleaning/crushing line	Metal removal and consistent grading of reclaimed material.
Fuel	Natural gas preferred; diesel/oil fallback	Fuel choice affects cost, emissions and location.
Quality control	On-site laboratory; RTA/DCL acceptance; ISO/IEC 17025 target	Mix approval and batch-level testing.
Storage/dispatch	Bitumen tanks, silos, weighbridge and loading system	Heat control and reliable truck dispatch.

Plant and RAP Suppliers

Supplier	Origin	Recovered position	RAP capability
Ammann	Germany / Switzerland	Existing operator relationship; primary option	Full RAP system; ABA UniBatch and ABP HRT lines.
Astec Industries	USA	Recommended from operating experience	RAP system available.
Marini / Fayat	Italy / France	Good supplier; strong installed UAE presence	RAP-capable systems.
NFLG	China	Recommended; potential JV option	RAP-capable systems.
CAMS	Italy	RAP feedstock cleaning and crushing	Supports consistent high-RAP feed.

Paving Fleet - One Set

Machine	Quantity	Role / specification	Working cost (EUR)
Vögele SUPER 1800-5i	1	Tracked paver; up to 700 t/h; paving width 2.55-10 m	350,000
BOMAG BW27RH	2	Pneumatic rollers; approximately 27 t ballasted	240,000
BOMAG BW 174	1 large + 1 small	Tandem rollers; primary steel-drum compaction	160,000
Bobcat skid-steer	1	Material handling and site clean-up	50,000
Complete set	-	One supply-and-lay operating set	800,000

The venture model includes three identical paving sets at EUR 2.4M total, matching an indicated laydown capacity of approximately 30,000 t/month against the plant's stated 20,000-40,000 t/month range. [R2]

8. Location Strategy

Location	Logistics and utilities	Investment role	Condition
Dubai Industrial City	Near Jebel Ali Port and Al Maktoum Airport; Jebel Ali gas corridor	Preferred Dubai-first candidate	Written approval for asphalt, RAP, bitumen, stockpiles, dispatch and gas.
Jebel Ali / JAFZA	Port adjacency and DUSUP gas-grid centre	Strong Dubai logistics candidate	Plot-specific gas and industrial-activity confirmation.
RAK Al Ghail	Northern Emirates coverage; advertised 24/7 government gas	Node-two candidate for Wynn/RAK	Validate daily haul, project pipeline and activity permissions.
Hamriyah, Sharjah	Port access and Northern Emirates coverage	Lower-cost / secondary candidate	Confirm gas and environmental route.
KEZAD, Abu Dhabi	Khalifa Port; between Abu Dhabi and Dubai	Potential later Abu Dhabi platform	Weaker for daily Dubai-first delivery.

SITE RULE Minimum plot size is stated as 10,000 m². Maximum haul is stated as two hours. No plot commitment should occur before the industrial zone and authorities confirm the full asphalt-production, RAP-processing, bitumen-storage, stockpile, truck-dispatch and gas-connection path in writing. [R2]

9. Regulation and Licensing

Approval	Required for	Principal risk
Land-use approval	Operating an asphalt plant on the selected plot	Industrial zone may reject hot-mix operations.
Environmental clearance	Emissions, dust, noise, fuel, traffic and runoff	Layout, mitigation and schedule impact.
Industrial licence	Manufacturing activity	Incorrect activity classification delays setup.
Civil Defence	Bitumen tanks, gas/fuel and fire safety	Tank/burner design may need revision.
Waste / RAP approval	RAP collection, storage, crushing, screening and reuse	Recycling strategy may be blocked despite plant approval.
Material approval	Mix design, laboratory testing and client/RTA acceptance	RAP use may be restricted by layer or client.
Gas NOC	Connection to DUSUP or relevant utility	Plot-specific availability and unquoted tariff.

R2 states that Dubai road asphalt must meet RTA specifications and Dubai Central Laboratory approval using AASHTO and BS EN methods, with producing laboratories holding ISO/IEC 17025 accreditation. It also claims registered industrial entities can import production equipment and bitumen free of the standard 5% customs duty. Both should be confirmed directly before underwriting. [R2]

10. Capital Investment

CAPEX line	Working cost (EUR)	Evidence classification	Verification requirement
Factory with recycling, CIF Dubai port (~80 containers)	7,000,000	PARTNER-SUPPLIED WORKING FIGURE	Obtain at least three current OEM quotations.

CAPEX line	Working cost (EUR)	Evidence classification	Verification requirement
Site setup and infrastructure	2,000,000	PARTNER-SUPPLIED WORKING FIGURE	Validate foundations, assembly, utilities, gas, drainage and fire systems by plot.
CAMS recycling system	400,000	PARTNER-SUPPLIED WORKING FIGURE	Current supplier quote and installation scope.
Paving fleet - 3 sets	2,400,000	PARTNER-SUPPLIED WORKING FIGURE	Dealer quotes and UAE delivery/registration costs.
Total	11,800,000	CALCULATED FROM PROVIDED MODEL	Approximately AED 47M at the case study's indicative conversion.

CAPEX EXCLUSION WARNING The recovered total does not clearly price land acquisition/lease, financing fees, corporate setup, all permitting, initial raw-material inventory, receivable funding, ramp-up losses or a formal contingency. Treat AED 47M as plant-platform benchmark CAPEX, not all-in project cost.

11. Operating Economics and Sensitivities

Base Working Model

Metric	Recovered value	Calculation / interpretation
Working volume	25,000 t/month	Model point below maximum capacity.
Ex-factory price	AED 235/t	$25,000 \times 235 = \text{AED } 5.875\text{M/month.}$
Net margin	AED 45/t	$25,000 \times 45 = \text{AED } 1.125\text{M/month.}$
Annualised sales	AED 70.5M	$\text{AED } 5.875\text{M} \times 12.$
Annualised net	AED 13.5M	$\text{AED } 1.125\text{M} \times 12.$
Simple payback	Approximately 3.5 years	$\text{AED } 47\text{M} / \text{AED } 13.5\text{M; before financing/ramp-up.}$
Supply-and-apply	AED 50/m ² ; approximately AED 400/t	Higher-value offer; conversion assumption not stated.

Indicative Per-Tonne Cost Stack

Cost component	Working figure (AED/t)	Status
Bitumen	77	MODELLED ASSUMPTION
Diesel / energy	42	MODELLED ASSUMPTION; gas could change it
Aggregate / filler	40	MODELLED ASSUMPTION
Laboratory, labour and maintenance	25	MODELLED ASSUMPTION
Overhead	8	MODELLED ASSUMPTION
Approximate total	192	MODELLED ASSUMPTION

ARITHMETIC INCONSISTENCY The approximate AED 192/t cost stack plus the stated AED 45/t net margin equals AED 237/t, slightly above the stated AED 235/t selling price. The model must be reconciled before it is used for investment approval.

Volume Sensitivity Using the Provided Price and Margin

Volume (t/month)	Monthly sales (AED)	Annual net (AED)	Simple payback on AED 47M
20,000	4.70M	10.80M	4.35 years
25,000 - base	5.875M	13.50M	3.48 years
30,000	7.05M	16.20M	2.90 years
40,000	9.40M	21.60M	2.18 years

Calculation note: All rows use the recovered AED 235/t sales price and AED 45/t net figure for 12 months. They do not model ramp-up, downtime, financing, tax, land, working capital or price/margin changes.

Raw-Material Benchmarks

Item	Low	Mid	High	Unit
Bitumen 60/70	1,900	2,075	2,250	AED/t
Aggregate 0-5 mm	38	48	58	AED/t
Aggregate 5-10 mm	45	55	65	AED/t
Aggregate 10-14 mm	48	59	70	AED/t
Aggregate 14-20 mm	50	62.5	75	AED/t
Limestone / mineral filler	110	145	180	AED/t
Diesel / fuel	4.33	4.33	4.33	AED/L
Industrial electricity	0.23	0.305	0.38	AED/kWh
RAP / milled asphalt	0	22.5	45	AED/t

Delivery Cost by One-Way Distance

Distance	Trip cost	AED/t	Interpretation
10 km	AED 245-318	11.1-14.5	Short urban haul.
25 km	AED 387-503	17.6-22.8	Typical metropolitan Dubai.
50 km	AED 623-810	28.3-36.8	Cross-emirate; margin pressure.
75 km	AED 860-1,118	39.1-50.8	Long haul and temperature risk.

Working logistics assumptions: 22 t/truck, 2.5 km/L loaded urban fuel economy and AED 150 base loading/waiting cost per trip. Practical minimum order is stated as 20-25 t.

12. Operating Requirements

Operating capability	Requirement	Evidence / gap
Plant operations	Experienced plant manager, operators, burner/RAP specialists and maintenance	Staffing count and UAE wage model not recovered.
Quality	Laboratory, mix design, calibration, batch certificates and ISO/IEC 17025 pathway	Approval steps and cost require direct confirmation.
Dispatch	Truck scheduling inside the two-hour temperature window	Fleet/truck count and outsourcing model are not priced.
Paving	Three complete paver/roller/loader sets with night-shift crews	Working equipment budget is recovered; labour/maintenance OPEX is not.
Feedstock	Bitumen, graded aggregates, filler and consistent RAP stream	Contracts, prices and RAP ownership/disposal economics are open.
Sales	Anchor demand, private developers, industrial clients, contractors, then public sector	Volume LOIs and payment terms are not recovered.
Utilities	Gas, electricity, water, drainage and fire systems	Plot-specific availability and tariffs remain open.

13. Principal Risks

Risk	Why it matters	Mitigation from recovered research	Residual issue
Utilisation	Low tonnage destroys fixed-cost absorption.	Ellington anchor demand, third-party sales and phased public work.	No signed volume LOIs recovered.
Bitumen volatility	Stated as roughly half of production cost; tracks crude.	RAP displaces virgin binder; bulk procurement.	Approved RAP percentage and feedstock economics open.
RAP approval	Plant approval does not automatically permit waste/RAP processing.	Parallel plant and RAP approval tracks.	Layer-specific RTA acceptance not recovered.
Plant / land CAPEX	EUR 11.8M is benchmark, not live quotation.	Three OEM bids and plot-specific civil-cost validation.	All-in project cost still unknown.
Gas connection	Preferred plant design depends on gas.	Shortlist gas-served zones and obtain NOC/tariff first.	Availability and tariff are plot-specific.
Competition	Incumbents can add RAP after proof.	First-mover capability, operator experience and developer anchor.	Defensibility depends on contracts and execution.
Demand timing	Committed programmes can still slip.	Phased entry and later RAK node.	No bottom-up tonnage schedule recovered.
Receivables	Construction payment cycles can consume cash.	Working-capital buffer and customer screening.	No DSO/working-capital model recovered.

14. Recommendation and Implementation Roadmap

RECOMMENDATION Proceed to conditional feasibility, not plant procurement. The evidence supports the strategic thesis but not a final capital commitment.

Phase	Focus	Key actions	Gate
0	Validate	Obtain plant, land, licence, utilities and raw-material quotes; map RTA/DCL and RAP approvals; secure anchor LOIs and third-party offtake.	No volume or margin model without dated quantities and quotes.
1	Establish	Select gas-served plot; obtain industrial/environmental/Civil Defence/RAP approvals; secure gas NOC; confirm customs treatment.	No land commitment without full activity and gas path.
2	Build	Procure RAP-ready plant and paving sets; commission plant and laboratory; approve mix designs.	No CAPEX from benchmark numbers; RTA/DCL product acceptance required.
3	Scale RAP	Commission RAP dryer/CAMS line, qualify recycled mixes and assess RAK node two.	Approved RAP mixes and realised margin advantage.

15. Missing Information and Due-Diligence Requirements

Workstream	Required evidence before investment
Market sizing	Bottom-up UAE/Dubai asphalt tonnage; tender pipeline; current supplier production and utilisation.
Anchor demand	Ellington and related-project tonnes/year, timing, specification and signed LOIs.
Commercial	Current ex-factory and delivered prices by mix; supply-and-lay rates; payment terms; customer concentration.
CAPEX	Three current RAP-ready plant quotations; installation scope; freight; civil works; contingency; fleet quotations.
Land and utilities	Plot rent/buy cost, permitted activity letter, gas NOC/tariff, electricity capacity, drainage and access.
Materials	Bitumen, aggregate, filler, RAP ownership/processing and transport contracts with current prices.
Regulation	Industrial, environmental, Civil Defence, RAP/waste and material-approval sequence, cost and timeline.
Financial model	Full monthly ramp-up, gross-to-net bridge, OPEX, staffing, DSO, working capital, tax, financing and downside cases.
Technical	Mix designs, layer-specific RAP limits, laboratory accreditation, uptime/maintenance and spare-parts plan.
Transaction	Final JV governance, reserved matters, profit definition, land rights, IP/know-how, non-compete and exit rights.

16. Conflicting or Updated Information

Issue	Recovered information	Required resolution
Competitor certainty	R1 confirms limited public plant evidence; R2 presents multiple disclosed capacities.	Verify every plant, ownership, operating status and practical output directly.

Issue	Recovered information	Required resolution
RAP market claim	R2 says no named UAE producer advertises RAP; R1 says company-level UAE RAP percentages were not found.	Treat as an evidence gap, not proof that no competitor has RAP capability.
Target vs sensitivity	Base technical target is 40% RAP, while cost reductions are shown at 50% and 70%.	Build 0%, 20%, 30% and 40% UAE cost curves using approved formulations.
Selling price vs cost stack	AED 235/t price; approximately AED 192/t cost; AED 45/t net.	Reconcile AED 237/t implied cost plus net with AED 235/t revenue.
Margin terminology	AED 45/t is called approximately 20% net margin.	Define gross margin, EBITDA and net profit consistently; AED 45/AED 235 = 19.1%.
All-in investment	Approximately AED 47M benchmark CAPEX.	Add land, working capital, finance, permits, contingency and ramp-up costs.
Capacity	320/380 t/h rated plant but only 20,000-40,000 t/month stated.	Reconcile shift pattern, uptime, maintenance and seasonality.
Payback	Approximately 3.5 years simple payback.	Replace with cash-flow IRR and equity payback after ramp-up, working capital, tax and financing.

17. Source Register

The source register preserves the citations recoverable from R1. R2 is a partner case study with financial assumptions and public-data summaries but no embedded URL register; those claims remain attributed to R2 rather than falsely presented as independently verified.

ID	Source	Type	Date	Use / limitation
R1	Dubai / UAE Asphalt Production Landscape	Internal research pack	1 Jun 2026	Primary source for public market map and external URLs.
R2	Asphalt Alpha x Ellington UAE Asphalt & RAP Market Entry	Partner / internal feasibility case study	Jun 2026	Primary source for JV structure, CAPEX and operating model; many inputs require validation.
S1	Al Naboodah Construction Group	Official company website	Not stated	Confirmed Dubai asphalt capability and infrastructure footprint.
S2-S3	Wade Adams and group references	Official / public company references	Not stated	Road capabilities and bitumen-chain context; not plant proof.
S4	Dutco Group	Official company website	Not stated	Dubai infrastructure role.
S5	Tarmac Group / Tarmac Middle East	Historical public reference	Not stated	Historical aggregates and asphalt role.
S6	Colas Group	Public reference	Not stated	Global road/asphalt benchmark; UAE plant unconfirmed.
S7	Etihad Rail	Public project reference	Not stated	Ghantoot involvement and package scale.
S8	Trojan Construction & Holding Group	Public company/project reference	Not stated	NPC/Trojan scale and Etihad Rail Package D.
S9	Al Marwan Machinery	Official company website	Not stated	Equipment ecosystem; not asphalt-production proof.
S10	Reuters - Dubai RTA awards Metro Blue Line	Reuters	19 Dec 2024	AED 20.5B, 30 km and 14 stations.

ID	Source	Type	Date	Use / limitation
S11	Dubai RTA opens Hessa Street Phase I	Times of India	12 Jan 2026	4.5 km corridor.
S12	Al Khail Road upgrade reference	Public road reference	Not stated	AED 700M, 3,300 m bridges and 6,820 m enhancements.
S13	Dubai-Al Ain Road reference	Public road reference	Not stated	AED 2B and 17 km corridor.
S14	Asphalt plant technical reference	Public technical reference	Not stated	Plant systems and components.
S15	Asphalt concrete recycling reference	Public technical reference	Not stated	RAP mechanics and context.
S16	Pavement milling reference	Public technical reference	Not stated	Milling process and RAP formation.

Recoverable External URLs

[S1] Al Naboodah: <https://www.alnaboodah.com/>

[S2-S3] Wade Adams: <https://www.wadeadams.com/>

[S4] Dutco: <https://www.dutco.com/>

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FINAL DATA-INTEGRITY STATEMENT This report consolidates the recovered source documents without conducting new market research. It is suitable for feasibility planning and investment-committee screening. It is not yet suitable for capital approval, supplier selection or public claims of market share without the due-diligence work listed above.