



**AL DHAFRA
RECYCLING
INDUSTRIES**

In partnership with Tadweer

**COMPANY
PROFILE**







Welcome

The importance of Construction and Demolition Materials Recycling field lies in keeping the environment clean and preserve our natural resources as reusing construction and demolition waste can save much energy and prevent carbon emissions by tenfold saves energy and reducing landfill waste.

Energy Savings: Recycling saves large amounts of energy, and in general it decreases the consumption of natural resources to produce new materials, help reduce your carbon footprint, and mainly helps reduce the need for harvesting raw materials

Within this profile pages we will give you a tour in this work field and how we can help you achieve these results



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**AL DHAFRA
RECYCLING
INDUSTRIES**
 In partnership with Tadweer

Managing Head





Ramy Youssef Alkhawaja

CEO

Ramy Youssef Alkhawaja is a hands-on guide for each project and builds trusted relationships with his partners, shareholders, customers, and staffs. Established the group since 2017, have always been captivated by strategic investments, mergers acquisitions, start-ups and developing new companies. We provide opportunities by partnering with leading companies of remarkable prominence including Tadweer. These partnerships have fortified our position across a wide range of sectors and actively partner of the UAE in achieving the nation vision.



Yosra Jedidi

COO

Yosra Jedidi a forward-thinking, multidisciplinary executive and business leader accomplished International Business. Over +10 years of diverse business services background including performance driven results in strategic planning, action plan execution, corporate leadership, profitability, project management, operational efficiency, staffing models and acquisition strategies.



Talal Tabbakh

General Manager

Talal Tabbakh has more than 16 years of experience in project management and business development for construction and infrastructure sectors in the UAE.

He holds two bachelor's degree in Executive Business Administration and Mechanical Engineering. And he has attended various courses/conferences concerning sustainable construction, recycling, and implementation of production lines. Continually driven to drive profitability, control costs, and improve processes.

Who We Are?

Al Dhafra Recycling Industries* is responsible for the processing of construction and demolition materials across the Emirate of Abu Dhabi. The aim of the facility is to reduce the level of construction and demolition material being disposed of in Abu Dhabi's landfills. In partnership with Tadweer, the facility processes material to produce recycled products suitable for use as road base aggregates and structured & non-structured backfill projects.

Regulations, introduced by Abu Dhabi's Executive Council, govern the recycling of construction and demolition material and its use in construction projects, as an alternative to further depleting scarce natural resources. Under the Executive Council's resolution (number 2008/373), construction projects are mandated to use a minimum quantity of 40 percent recycled material, if available.

* Al Dhafra Recycling Industries operates in Abu Dhabi, United Arab Emirates, in partnership with Tadweer (The Centre of Waste Management).



The background image shows a large-scale industrial or construction site. In the foreground, a yellow excavator is positioned on the left side of a deep, dark pit. Another excavator is visible in the distance on the right. The background features a large, circular structure, possibly a recycling facility, with various pipes and machinery. The sky is a mix of blue and orange, suggesting a sunset or sunrise. The overall scene is one of active industrial work.

**Al Dhafra Recycling Industries operates in
Abu Dhabi, United Arab Emirates, in partnership
with Tadweer (The Centre of Waste Management)**

" Our company is the only one of its kind in this work field within Abu Dhabi"

Our Partner

Tadweer

Formally known as the Center of Waste Management Abu Dhabi, Tadweer is the leading provider of comprehensive waste and environmental services in the UAE.

Tadweer's vision is to create a quality environment through dedicated leadership and educational partnership to reduce wastage while promoting recycling and resource conservation.

For more information, visit www.cwm.ae



Tadweer Mission

Building Integrated Systems For Waste Management & Pest Control, & Providing Added Value Services To Customers & Society In Accordance With Approved Standards & Practices Through Building Effective Partnerships & Investment Of Assets, Financial, Human, & Technical Resources In Pursuit Of Sustainability By Conserving Natural Resources & Creating a Responsible Society That Contributes To Reducing Of Waste Generation & To Transform Waste Into An Economic Pillar For The Emirate Of Abu Dhabi

Tadweer Vision

Towards a Sustainable Waste Management & Pest Control System In The Emirate Of Abu Dhabi

Tadweer Values:

Sustainability . Excellence and Innovation . Accountability . Efficiency . Engagement Achieving Result



Why Us?

We built our success throughout our previous years of experience on the appropriate understanding of the specificity of each case of our clients' projects, whose precious trust we gained. International and global keeping pace with the goals of sustainable development and modernizing our business strategy by introducing solar energy in our plant

« As well as the IoT technology will enable the C&D Waste Recycling Station to increase operating time to the maximum limit, while also improving energy efficiency through the use of smart remote movement sensors which will monitor the station's assets and machinery, as this technology will connect every device using a cloud-based platform that can produce a detailed analysis of every device's status.

In addition to smart wireless sensors monitor critical assets in the recycling plant, linking each device to the Sensoteq Analytix cloud platform that allows for detailed analysis of the device's health status.»

You can know more details by visiting company website and through Construction WeeK Article

Source: * Construction WeeK Article: Tadweer applies IoT technology at C&D waste recycling station



When you put the
whole picture together,
Recycling is the right thing to do.



World orientation towards sustainability and net zero

Supporting Sustainable Development Goals

Where the issue of environment and sustainability has become a **global issue**, the current researches in construction fields aims to identify the employment of the dimensions of sustainable development in construction and waste recycling to develop environmental awareness, as the environment is considered one of the global problems that have become preoccupying many thinkers and researchers in environmental affairs,

As the current era is witnessing rapid scientific and technological progress and development in various fields of life, especially in the field of environment. In order to keep pace with this development and progress and the resulting important issues and dimensions in all economic, social and scientific aspects,.

This development must be reflected on an important group of society in issues of environmental awareness and sustainable development. The importance of our work lies in employing the dimensions of sustainable development in materials and waste recycling to develop awareness environmental.

SUSTAINABLE DEVELOPMENT GOALS



Our Work & Sustainability

Sustainable & Environmental Achievements

2011: Participation of Al Dhafra C&D Recycling facility in the 2011 Publication “Etihad Rail Waste Recycling will save 5 million Truck Kilometres” that aims to supply at least 750,000 tonnes of recycled aggregates.

2017: The launch of Sustainable Construction and Demolition Waste management guideline.

2017: Winners of 2017 MENA Green Building Awards honored for innovation and excellence in sustainability practices by Emirates Green Building Council

2018: ENERWHERE has been contracted by Al Dhafra Recycling Industries since January 2018. A leading specialist in Solar plants and sustainable energy provider in the region.

2020: The recognition of Al Dhafra Recycling facility towards increasing the solar capacity to help lower its carbon footprint by avoiding more than 1,300 tonnes of carbon emissions

Tadweer’s sustainable production goals*

« **These measures are all in line with sustainable production goals because by** ensuring that equipment operates efficiently, we prevent dangerous and costly equipment failure incidents.

In 2020, Tadweer inaugurated Phase two of the solar power plant project at the C&D Waste Recycling Station in the Al Dhafra region of Abu Dhabi, making it the first station of its kind in the world to have %90 of its operations powered with solar energy.»

* Source: Construction Week Article: Tadweer applies IoT technology at C&D waste recycling station

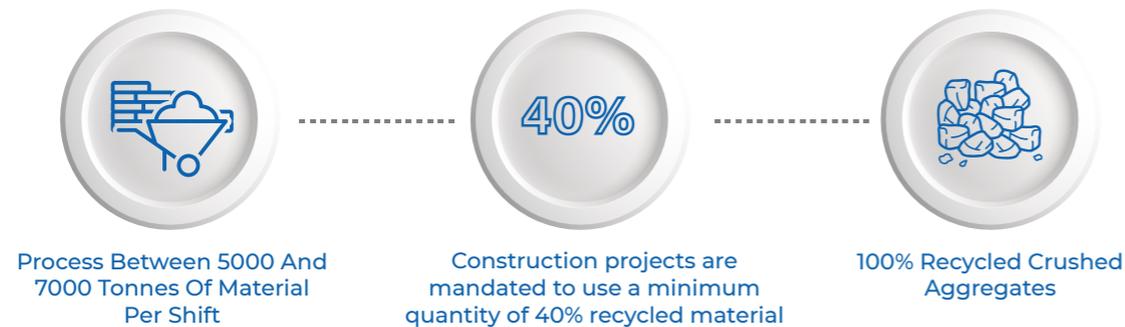




Our Work



Our Work & Accreditations

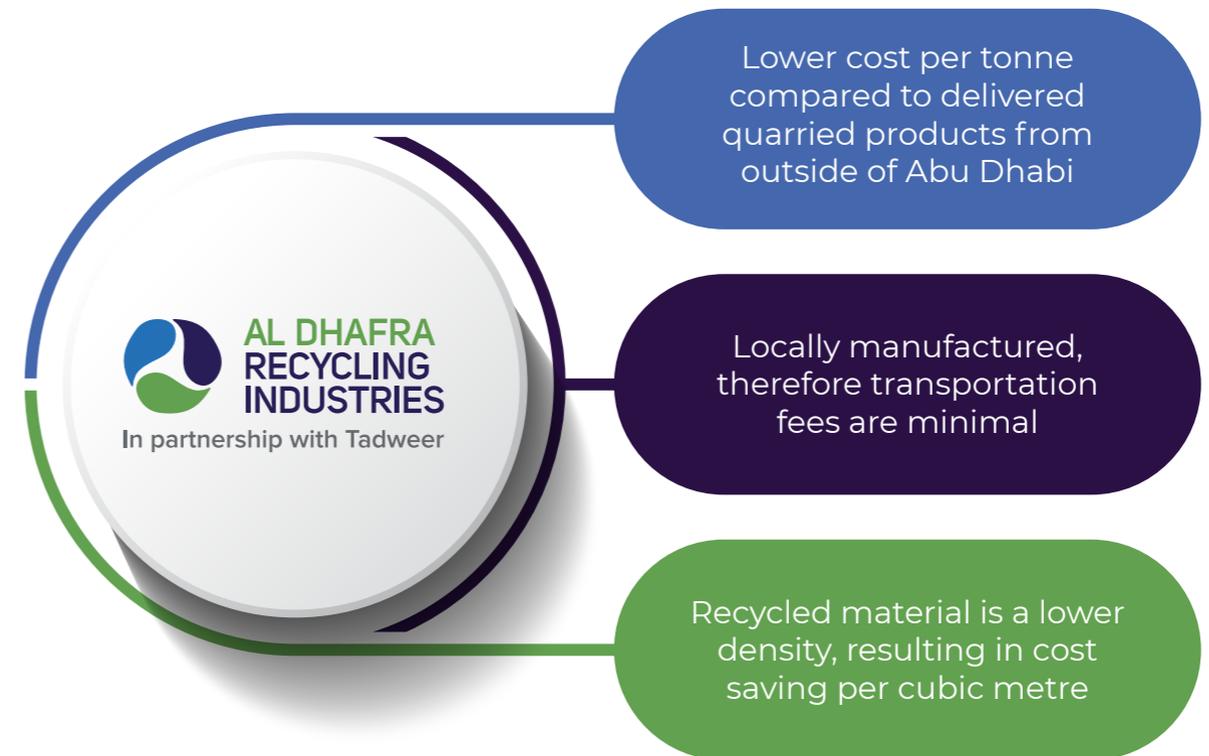


Accreditations

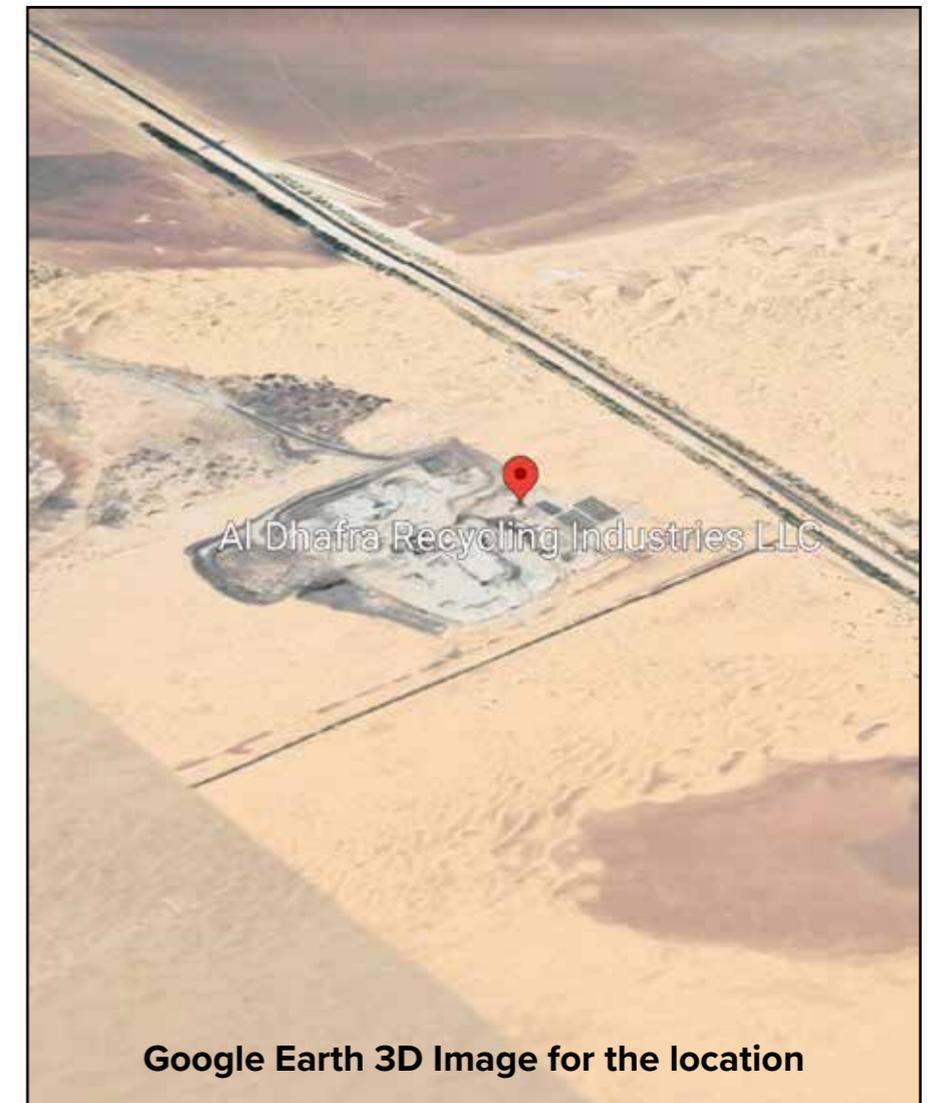
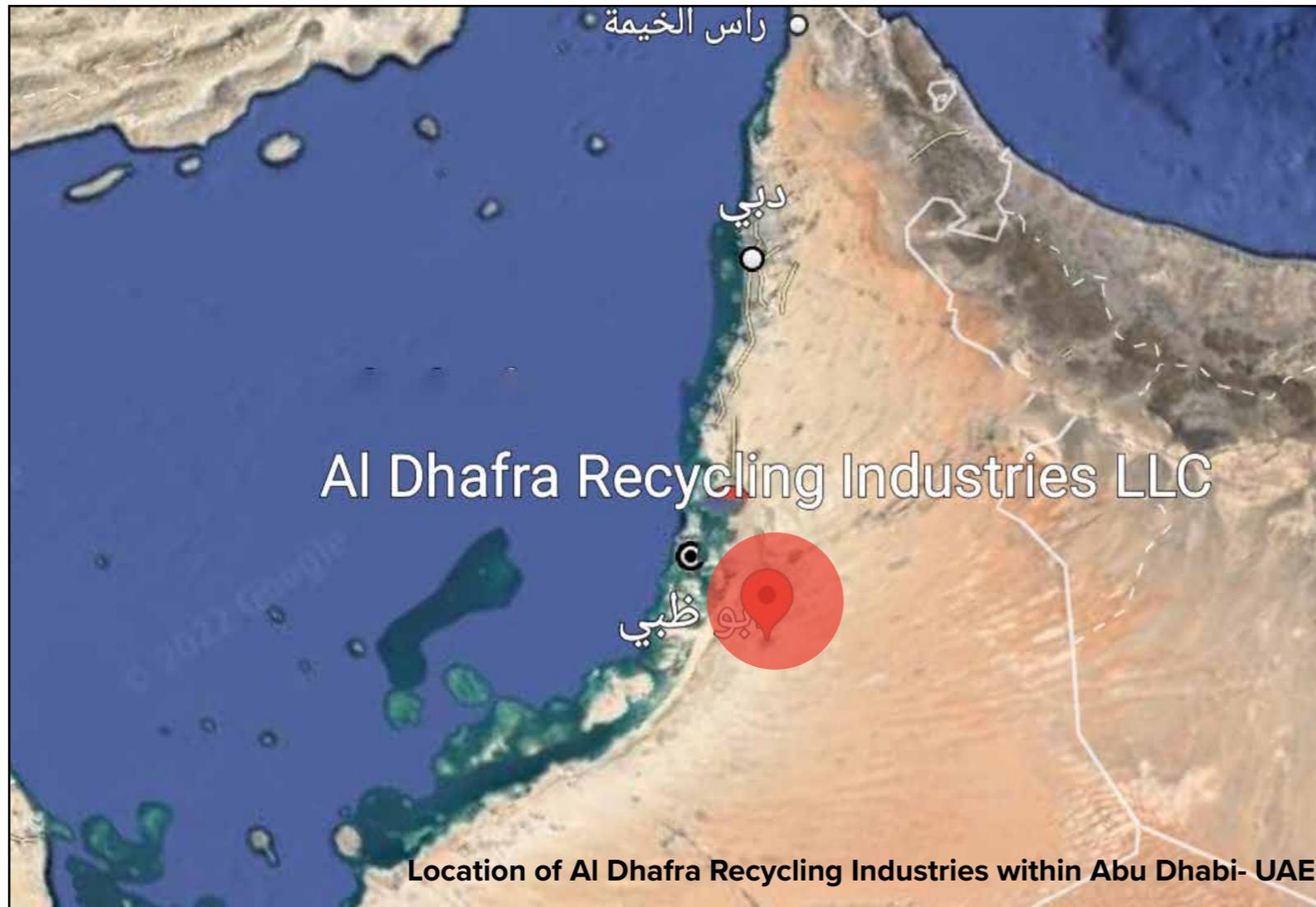
Al Dhafra Recycling Industries has received accreditation from the following organisations:

- Tadweer/Centre of Waste Management
- Abu Dhabi Quality & Conformity Council
- ISO Certified
- Zonescorp
- Environment Agency Abu Dhabi (EAD)
- Abu Dhabi Chamber of Commerce
- Abu Dhabi Civil Defence

Use of recycled construction and demolition materials also yields a number of commercial benefits, including:

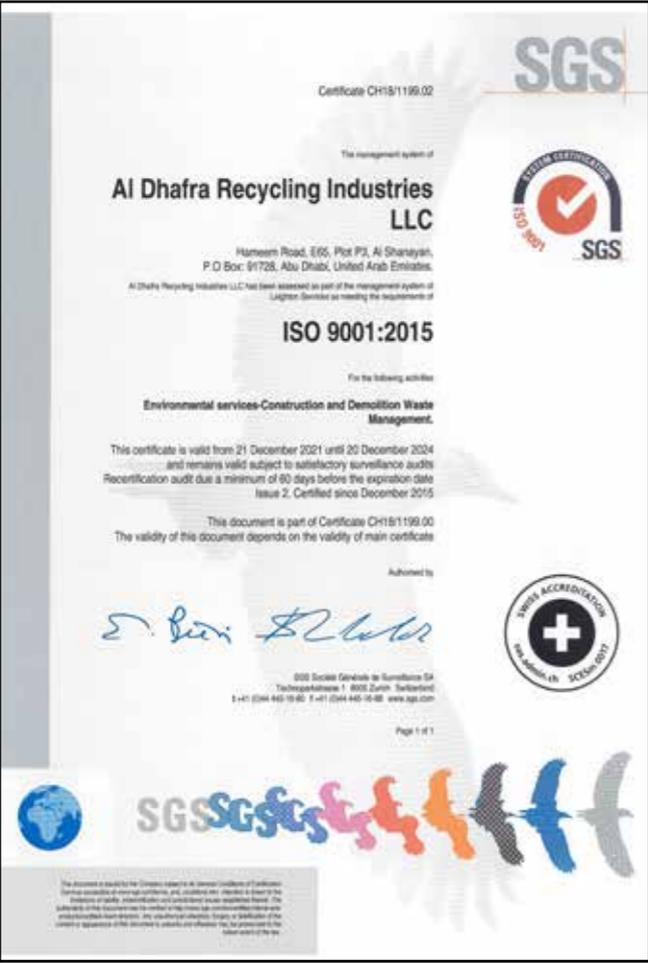


Location Map



ISO Certifications

Al Dhafra Recycling Industries operates according to Management Systems for Quality - ISO 9001:2008, Environment - ISO 14001:2004 and Health and Safety - OSHAS 18001:2007. Product testing is performed by a leading independent test laboratory in Abu Dhabi.





شهادة المطابقة Certificate of Conformity

Certificate No. **QAD-2022.0533.01-RA** رقم الشهادة:

This certificate is issued for the product: **RECYCLED CRUSHED AGGREGATES** تم منح هذه الشهادة للمنتج:

Certificate Holder: **Al Dhafra Recycling IndustriesLLC** الخاص بشركة:

According to the requirements of: **Recycled Crushed Aggregate Certification Scheme** وفقاً للمتطلبات الخاصة بـ:

Issued Date: **08 June 2022** تاريخ الإصدار:

Expiry Date: **07 June 2023** تاريخ انتهاء الصلاحية:



QAD-2022.0533.01-RA

This is an electronic certificate and does not require stamp
Visit our website to verify this certificate:
<https://jawdah.qcc.abudhabi.ae/en/pages/homepage.aspx>
Any changes or modification on this certificate will affect its validity

هذه الشهادة صدرت إلكترونياً ولا تحتاج إلى ختم
للتأكد من صحة هذه الشهادة يرجى زيارة موقع جودة الإلكتروني:
<https://jawdah.qcc.abudhabi.ae/en/Pages/homepage.aspx>
أي كسب أو تغيير في هذه الشهادة يلغيها



وثيقة المطابقة Conformity Document

Certificate No:	QAD-2022.0533.01-RA	رقم الشهادة:
Expiry Date:	07 June 2023	تاريخ الانتهاء:

Issuing Date: **08 June 2022** تاريخ الإصدار:

Conformity Scheme: **Recycled Crushed Aggregate Certification Scheme** برنامج المطابقة:

Product: **RECYCLED CRUSHED AGGREGATES** المنتج:

Name and Address of the Licensee: **Al Dhafra Recycling IndustriesLLC Hameem Road,E65, Plot P3, Al Shanayan, P.O Box: 91728, Abu Dhabi, UAE** اسم وعنوان صاحب الحق باستخدام العلامة:

Name and Address of the Manufacturer and the Factory: **Al Dhafra Recycling IndustriesLLC Hameem Road,E65, Plot P3, Al Shanayan, P.O Box: 91728, Abu Dhabi, UAE** اسم وعنوان المصنع ومكان التصنيع:

Trademark / Brand Name: **SUB BASE AND BASE COURSE** العلامة التجارية / الاسم التجاري:



QAD-2022.0533.01-RA

This is an electronic certificate and does not require stamp

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<https://jawdah.qcc.abudhabi.ae/en/Pages/homepage.aspx>

أي كسب أو تغيير في هذه الشهادة يلغيها

Our Capabilities

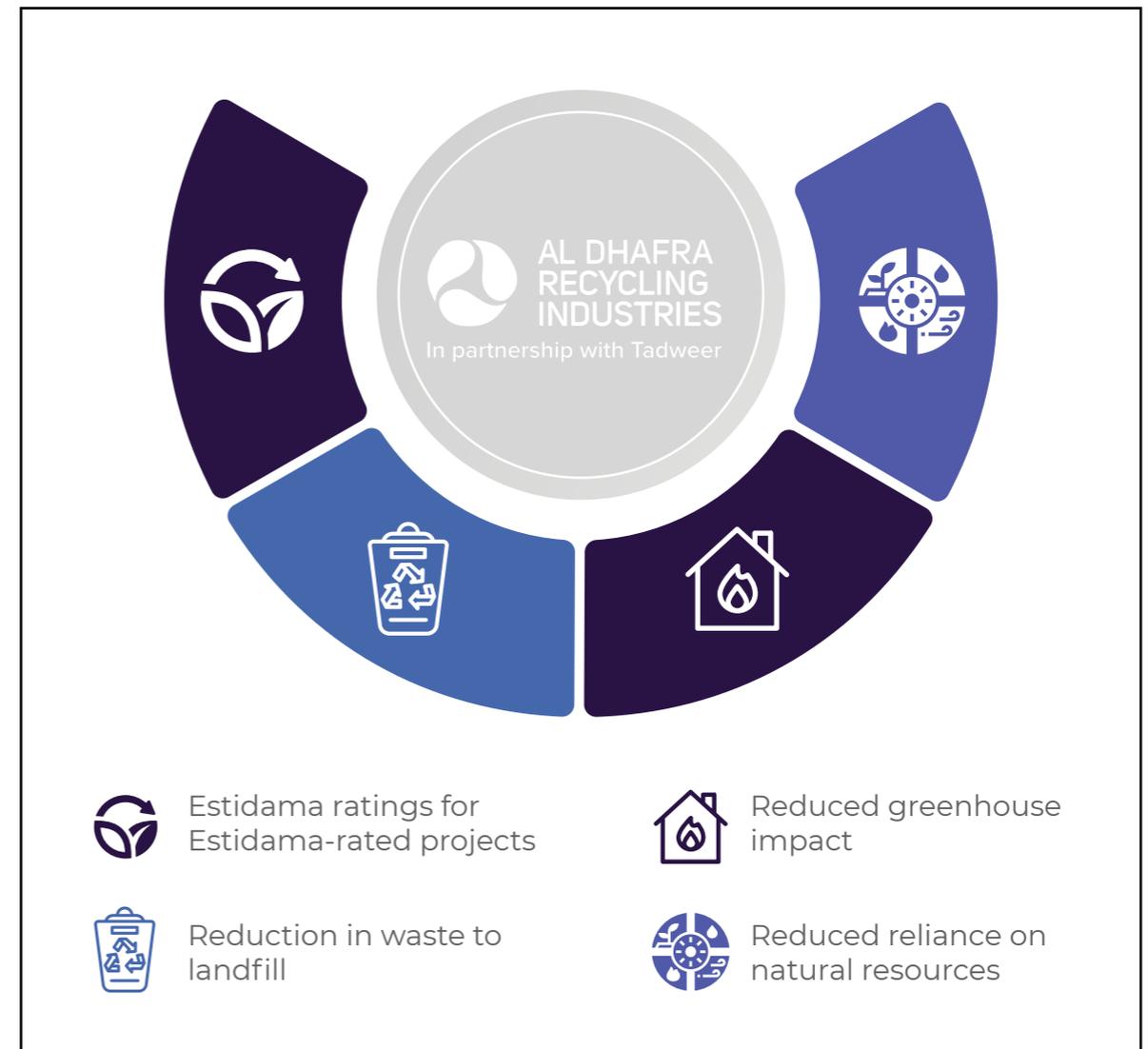
In line with Abu Dhabi Government's vision for sustainability, and under the Government concession awarded in 2009, Al Dhafra Recycling Industries, and Tadweer, facilitate the receiving and processing of construction and demolition material, such as concrete, asphalt and excavation material.

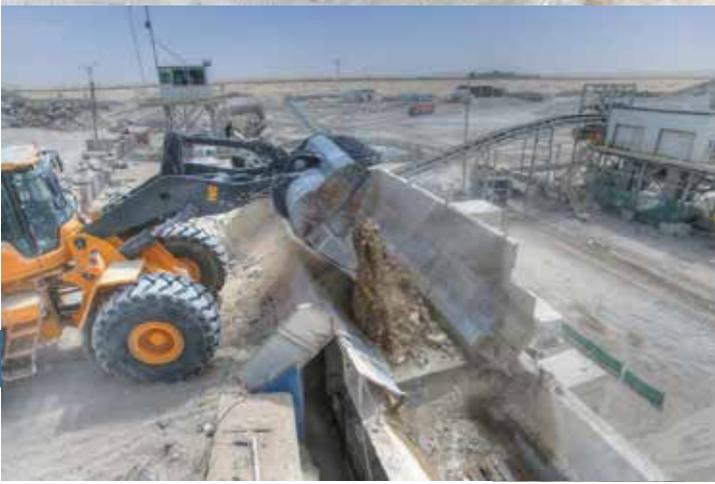
Al Dhafra Recycling Industries has the capacity, resources and expertise to design, build and operate numerous resource recovery projects via the collection, tracking and processing of construction and demolition materials.

All materials sent to the recycling plant are inspected for suitability before processing. Metals and other non-suitable materials are extracted before the construction and demolition material is diverted to the processing plant.

Following additional product testing by third party independent laboratories, well-graded recycled material (37-mm) is produced, which is used for road-base, sub-base, structural fill, trench bedding, hardstand and low-dust asphalt products.

All recycled material produced at Al Dhafra Recycling Industries is %100 recycled crushed aggregates. Use of recycled crushed aggregates also achieves:





Our Clients

Through company work journey; our clients, customers, companies from many construction industries, and from both governmental and private sections have relied on us, and we were keen to provide tailored materials solutions for our clients to facilitate their building and infrastructure results and strategy development.

Recycled material is currently being used as road base for construction in various prestigious projects such as:

- Abu Dhabi Airport Company - Abu Dhabi Airport T3 Project
- Abu Dhabi Municipality - Abu Dhabi City road works
- Abu Dhabi National Oil Company (ADNOC)
- Abu Dhabi Ports Company - Khalifa Port Project
- Etihad Rail - Shah-habshan-Ruwais Railways
- Habshan Crude Oil Pipeline for IPIC
- Shah Gas Development
- Western Region Municipality
- DoT / Musanada

For example part from our work steps is attend internal quality audits performed in accordance with schedule & address opportunities for improvements (OFI) & Major/Minor non-conformances raised as Audits are scheduled and planned through the Site HSE Activity Tracker and Attend internal quality audits & action system deficiencies where identified in a timely manner, this step and the rest of Al Dhafra Recycling Industries work process is supervised precisely and in detail to assure quality as it should be.







Materials, Quality, Equipments



Quality and Performance

International & Local experience demonstrates that recycled products perform as well if not better than virgin natural materials

Environmental

- Fits Abu Dhabi's vision for sustainability/ESTIDAMA requirements
- More than %50 reduction in waste to landfill
- Reduced greenhouse impact (production and transportation of quarried products)
- Reduced reliance on natural resources
- Recycling Steel

Financial/Commercial

- Cost competitive compared with delivered quarried products
- Locally manufactured in Abu Dhabi rather than imported (Strategic)
- Location; Hameem Road, Western Region, AD.
- Lower density of material results in savings {%20-15 SAVING}



We hereby confirm that
the material produced from our plant is
%100 Recycled Crushed Aggregates (RCA).

RCA Applications

The materials received in our plant are Construction and Demolition materials which are all covered by the C&D concession, as such, we hereby confirm that the material produced from our plant is %100 Recycled Crushed Aggregates (RCA).

The material produced is a 0-37.5mm well graded meeting the requirement of Recycled Crushed Aggregates for Base Course and Sub base specifications.



Products: Recycle Crushed Aggregate (37-0mm)

Aggregate Base course/ Sub Base

Wet-mix Macadam

Sub Ballast & Structural fill

Trench bedding

Hardstand and low dust asphalt products

Foundation products

Car Parks, site mobilization, temporary roads access and so forth.

Aggregates Single Size to be added in;

**Ready-mix
Concrete**

**Precast, Blocks
and interlocking
Factories**

**Asphalt
Wearing & Base
course
mix designs**

**Pavement &
Pipe Bedding**

Recycled Asphalt Product (Crushed Asphalt 37.5 mm- 0mm) over 300,000 tons available

Materials Specification

Sampels for detailing the specifications that are applicable for each Raw Material or Consumable, each as mutually approved in writing by the parties.

TEST CERTIFICATE
 Tests carried out at Al Reem Island Laboratory, Abu Dhabi

Client: Al Dhafra C & D Recycling Facility
 Address: P.O. Box 91729, Abu Dhabi, U.A.E.
 Contact: Mr. Karim Ibrahim Elmehy
 Mobile No: +971 50 0007396
 Tel. No: +971 52 5851050
 Fax No: +971 52 5851160
 Email ID: Karim.Elmehy@alrifi.ae

Element Ref. No: A22-00076 Rev. 0
 Date Reported: 04 January 2022
 Date Tested: 04/01/2022 - 16/01/2022
 Tested By: Mervat / Sandeep / Jyoti / Rey / Neel / Rajith

Order No:

Project: Al Dhafra C & D Recycling Facility
 Main Contractor: Al Dhafra C & D Recycling Industries
 Material Description: Subbase / Base Course Materials
 Client Reference: Element Ref. No. - TS-10642
 Source: Recycling Material
 Supplier: Al Dhafra C & D Recycling Facility
 Weather Condition: Sunny
 Date of Sampling: 02/01/2022 - 09/01/2022
 Sampled By: Element
 Sample Location: Production Plant Dry

SIEVE ANALYSIS Test Method: BS 812 Sec 103.1: 7.2: 1995

Test Sieve Size, mm	Total Passing, %
37.5	100
28.0	96
20.0	80
14.0	67
10.0	36
6.3	48
5.0	46

FLAKINESS INDEX Test Method: BS 812 Part 105.1: 1995

Flakiness Index
11
Project Limit - Max 30%

ELONGATION INDEX Test Method: BS 812 Part 105.2: 1995

Elongation Index
19
Project Limit - Max 30%

Page 1 of 4

LOS ANGELES ABRASION* Test Method: AASHTO T96-02 (Reapproved 2015)

Grading	Loss, %
A	22
Project Limit	Max 40%

FRACTURED PARTICLES IN COARSE AGGREGATES* Test Method: ASTM D5821-13 (Reapproved 2017)

Test Condition	Result, % by Weight
Two or more fractured faces material retained on 4.75mm	100

CBR TEST PREPARATION & COMPACTION* AASHTO T190-19 (Class 5 & 6)

COMPACTION DATA

	10	30	85
Number of Blows	10	30	85
Material Retained on 19 mm, %	18	18	18
Material Passed	18	18	18
Mixture content as compacted, %	9.9	9.9	9.8
Dry Density as compacted, Kg/m ³	1834	1909	1990

SOAKING & AFTER TEST DATA

Test Condition	Soaked	Soaked	Soaked
Surcharge Amount, Kg	4.54	4.56	4.56
Soaking Period (hrs)	96	96	96
Swell, %	0.07	0.04	0.03
Moisture content top 1 inch, %	14	13	12

Page 2 of 4

CBR TEST RESULT* AASHTO T193-13 (Reapproved 2017)

	10	30	85
Number of Blows	10	30	85
Dry Density as compacted, Kg/m ³	1834	1909	1990
California Bearing Ratio at 0.1" penetration	76	190	300
Interpolated CBR value at 0.1" penetration 95% of MDD		237	
Project Limit		Min 100	

DRY DENSITY AS MOULDED VERSUS CBR, %

Page 3 of 4

Sampels for detailing the specifications that are applicable for each Raw Material or Consumable, each as mutually approved in writing by the parties.

element

Client: Al Dhafa C & D Recycling Facility
 Project: Al Dhafa C & D Recycling Facility
 Element Ref. No.: A22-00076 Rev. 0
 Date Reported: 10 February 2022

CHLORIDE CONTENT		Test Method: BS 812 Pt 117: 1998	
And Soluble Chloride Content, % (by Weight)	Project Limit	0.48	Max 2%

SULPHATE CONTENT		Test Method: BS 812 Pt 118: 1988	
And Soluble Sulphate, SO ₃ , % (by Weight)	Project Limit	1.14	Max 2%

BOUNDNESS OF AGGREGATES* - MgSO ₄					Test Method: AASHTO T194-99 (Reapproved 2016)				
COARSE AGGREGATE									
Test Fraction Size, mm	Original Retained, %	Weighted test fraction before test, g	% passing designated sieve after test	Weighted loss, %					
37.5 - 19.0	18	1813.7	9.6	0.3					
19.0 - 9.5	26	1001.8	2.7	0.8					
9.5 - 4.75	10	300.2	5.7	0.6					
4.75 Passing	44	--	--	--					
Total Loss				1.7					
Project Limit				Max 15%					
FINE AGGREGATE									
Test Fraction Size, mm	Original Retained, %	Weighted test fraction before test, g	% passing designated sieve after test	Weighted loss, %					
4.75 Retained	36	--	--	--					
4.75 - 2.36	12	130.0	16.7	2.4					
2.36 - 1.18	7	150.0	18.1	1.3					
1.18 - 0.850	8	130.0	15.8	0.8					
0.850 - 0.300	4	--	--	0.6					
Passing 0.300	13	--	--	--					
Total Loss				5					
Project Limit				Max 15%					

Certificate Comments: Above test results meet the requirements of Clause 2.2 & 2.3 of Recycled Crushed Aggregate (RCA) Base Course Specification, Version 2 - 01 March 2012, wherever applicable.

Notes: 1. *AM AZLA accredited.
 2. MOD (1000g/m³) and DMC (5.8%) value was provided by Element Site Laboratory.
 3. Sieve Analysis reported for Flatness & Elongation Index Purpose.
 4. Conformity statement reported with no decision rule applied.

For and on behalf of Element Materials Technology Limited Abu Dhabi

ALDHAFRA RECYCLING INDUSTRIES

100, Al Dhafa C & D Recycling Facility, Al Dhafa, Abu Dhabi, UAE
 P.O. Box 81725, Abu Dhabi, UAE
 T: +971 2 551 99 99
 F: +971 2 551 99 99
 E: info@aldfra.com

element

Client: Al Dhafa Recycling Industries
 Address: P.O. Box 81725, Abu Dhabi, UAE
 Contact: Mr. Karam Ibrahim Sidawy
 Email: karam.sidawy@adri.ae
 Element Ref. No.: Element-TS-10642 Rev.0
 Date Reported: 05 January, 2022
 Tested By: Kakkasan

TEST CERTIFICATE
 (Sampled, Tested and Reported from Al Dhafa Recycling Industries Site Lab - Al Dhafa)

Project: Al Dhafa Recycling Facility
 Consultant: Not Applicable
 Contractor: ADRI
 Sample Reference: Crushed Concrete Materials
 Client Reference: Subbase / Base Course Materials
 Sample Source: Recycling Material
 Sample Date: 02 January 2022 @ 09:00 Hrs.
 Weather Condition: Sunny
 Sampled By: Element
 Sample Location: Production pile

SIEVE ANALYSIS		Test Specification: ASTM C 136/C136M-19 & C117-17	
Sieve Size, mm	Total Passing, %		
60.0	100		
37.5	100		
25.0	92		
19.0	82		
12.5	63		
9.5	54		
4.75	44		
2.36	33		
2.00	29		
1.18	25		
0.600	21		
0.425	19		
0.300	17		
0.150	6		
0.075	5		

For and on behalf of Element Materials Technology Limited Abu Dhabi

ALDHAFRA RECYCLING INDUSTRIES

100, Al Dhafa C & D Recycling Facility, Al Dhafa, Abu Dhabi, UAE
 P.O. Box 81725, Abu Dhabi, UAE
 T: +971 2 551 99 99
 F: +971 2 551 99 99
 E: info@aldfra.com

element

Client: Al Dhafa Recycling Industries
 Project: Al Dhafa Recycling Facility
 Element Ref. No.: Element-TS-10642 Rev.0
 Date Reported: 05 January, 2022

MOISTURE CONTENT		Test Method: ASTM D 2216-19	
Moisture Content, %	Project Limit	5.1	

SAND EQUIVALENT		Test Method: AASHTO T176-00	
Sand Equivalent, %	Project Limit	37	

PLASTICITY INDEX*				Test Specification: ASTM D 4318-10 ¹			
Test	Liquid Limit (%)	Plastic Limit, %	Plasticity Index				
Result	--	--	Non-Plastic				
ASTM D2940-03 Limits	Max 25	--	Max 4				
Class 2 Crushed Concrete Spec Limit	Max 35	--	Max 0				

METAL, GLASS AND ASPHALT PIECES IN COARSE AGGREGATE COARSER THAN 5.0mm*			TEST METHOD: Generally, in accordance with BS 812: Part 106:1985 Clause 6		
Test Fraction Size	Result, % of Metallic (steel, aluminum, and iron)	Result, % High Density (glass, brick, and Asphalt)			
Retained 5.00 mm	Nil	2.0			
Abu Dhabi Quality and Conformity Council (ADQCC) Limit	Max 1	Max 10			

LOW DENSITY MATERIALS SUCH AS PLASTIC, RUBBER, PLASTER and OTHER FRIABLE MATERIALS IN COARSE AGGREGATE COARSER THAN 5.0mm*			TEST METHOD: Generally, in accordance with BS 812: Part 106:1985 Clause 6		
Test Fraction Size	Result, % of Low Density (Plastic, rubber, plaster, clay lumps and others friable materials)				
Retained 5.00 mm	0.54				
Abu Dhabi Quality and Conformity Council (ADQCC) Limit	Max 1				

WOOD, OTHER VEGETABLE OR DECOMPOSABLE PIECES IN COARSE AGGREGATE COARSER THAN 5.0mm*			TEST METHOD: Generally, in accordance with BS 812: Part 106:1985 Clause 6		
Test Fraction Size	Result, % of Wooden pieces				
Retained 5.00 mm	0.14				
Abu Dhabi Quality and Conformity Council (ADQCC) Limit	Max 0.20				

Certificate Comments: 1. The Above test result meets the Subbase requirements for Recycled Crushed Aggregate Subbase Section 3.2.6 Table 3-17, RCA Sub-base physical requirements of Page No 3 of 34 Abu Dhabi Quality and Conformity Council (ADQCC) Limit.
 2. Conformity statement reported with no decision rule applied. Uncertainty of measurement available upon request.

For and on behalf of Element Materials Technology Limited Abu Dhabi

ALDHAFRA RECYCLING INDUSTRIES

100, Al Dhafa C & D Recycling Facility, Al Dhafa, Abu Dhabi, UAE
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 E: info@aldfra.com

Materials Specification

Sampels for detailing the specifications that are applicable for each Raw Material or Consumable, each as mutually approved in writing by the parties.

element

Client: Al Dhafra Recycling Industries
Project: Al Dhafra Recycling Facility
Element Ref. No: Element-TS-10542 Rev 0
Date Reported: 05 January, 2022

SIEVE ANALYSIS		Test Specification: ASTM C 136/C136M-19 & C117-17	
Sieve Size, mm	Total Passing, %	Abu Dhabi Quality and Conformity Council (ADQCC) Limit	
50.0	100	100	
37.5	100	95-100	
25.0	92	92	
19.0	83	75-92	
12.5	63		
9.5	54	50-70	
4.75	44	30-55	
2.36	32		
2.00	29		
1.18	25		
0.600	21	12-24	
0.425	19		
0.300	17		
0.150	6		
0.075	5	0-8	

Certificate Comments:

- The Above test result meets the Base course requirements for Recycled Crushed Aggregate Base Course Section 3.2.7 Table 3-15: RCA Base Testing requirements of Page No 3 of 39 Abu Dhabi Quality and Conformity Council (ADQCC) Limit.
- Conformity statement reported with no decision rule applied. Uncertainty of measurement available upon request.

Date Tested: 02-05 January 2022

For and on behalf of Element Materials Technology ME Limited Abu Dhabi - Site Laboratory
Khalid Hassan Hangoover
Site Laboratory Supervisor

Page 3 of 5

element

Client: Al Dhafra Recycling Industries
Project: Al Dhafra Recycling Facility
Element Ref. No: Element-TS-10542 Rev 0
Date Reported: 05 January, 2022

SIEVE ANALYSIS		Test Specification: ASTM C 136/C136M-19 & C117-17	
Sieve Size, mm	Total Passing, %	Abu Dhabi Quality and Conformity Council (ADQCC) Limit	
50.0	100	100	
37.5	100	95-100	
25.0	92	92	
19.0	82	85-95	
12.5	63		
9.5	54	30-55	
4.75	44	25-55	
2.36	32		
2.00	29	16-40	
1.18	25		
0.600	21		
0.425	19	8-20	
0.300	17		
0.150	6		
0.075	5	2-8	

Certificate Comments:

- The Above test result meets the Sub-base requirements for Recycled Crushed Aggregate Sub-base Course Section 3.2.7 Table 3-15: RCA Base Testing requirements of Page No 3 of 39 Abu Dhabi Quality and Conformity Council (ADQCC) Limit.
- Conformity statement reported with no decision rule applied. Uncertainty of measurement available upon request.

Date Tested: 02-05 January 2022

For and on behalf of Element Materials Technology ME Limited Abu Dhabi - Site Laboratory
Khalid Hassan Hangoover
Site Laboratory Supervisor

Page 4 of 5

element

Client: Al Dhafra Recycling Industries
Project: Al Dhafra Recycling Facility
Element Ref. No: Element-TS-10542 Rev 0
Date Reported: 05 January, 2022

MOISTURE DENSITY RELATIONS OF SOILS Using a 4.54 Kg Rammer and a 457mm Drop		
Test Specification: AASHTO T180-10		
Preparation method	AASHTO T180-10	Test Procedure: D
Retained on 30.0 mm	Nil	Moist Volume, cc: 2123
Cumulative Retained % on 19.0 mm	16	% of Material Replaced: 18
Cumulative Retained % on 4.75 mm	98	
Optimum Water Content (%)		10
Modified Maximum Dry Density (Kg/m ³)		1990
Project Limit		-

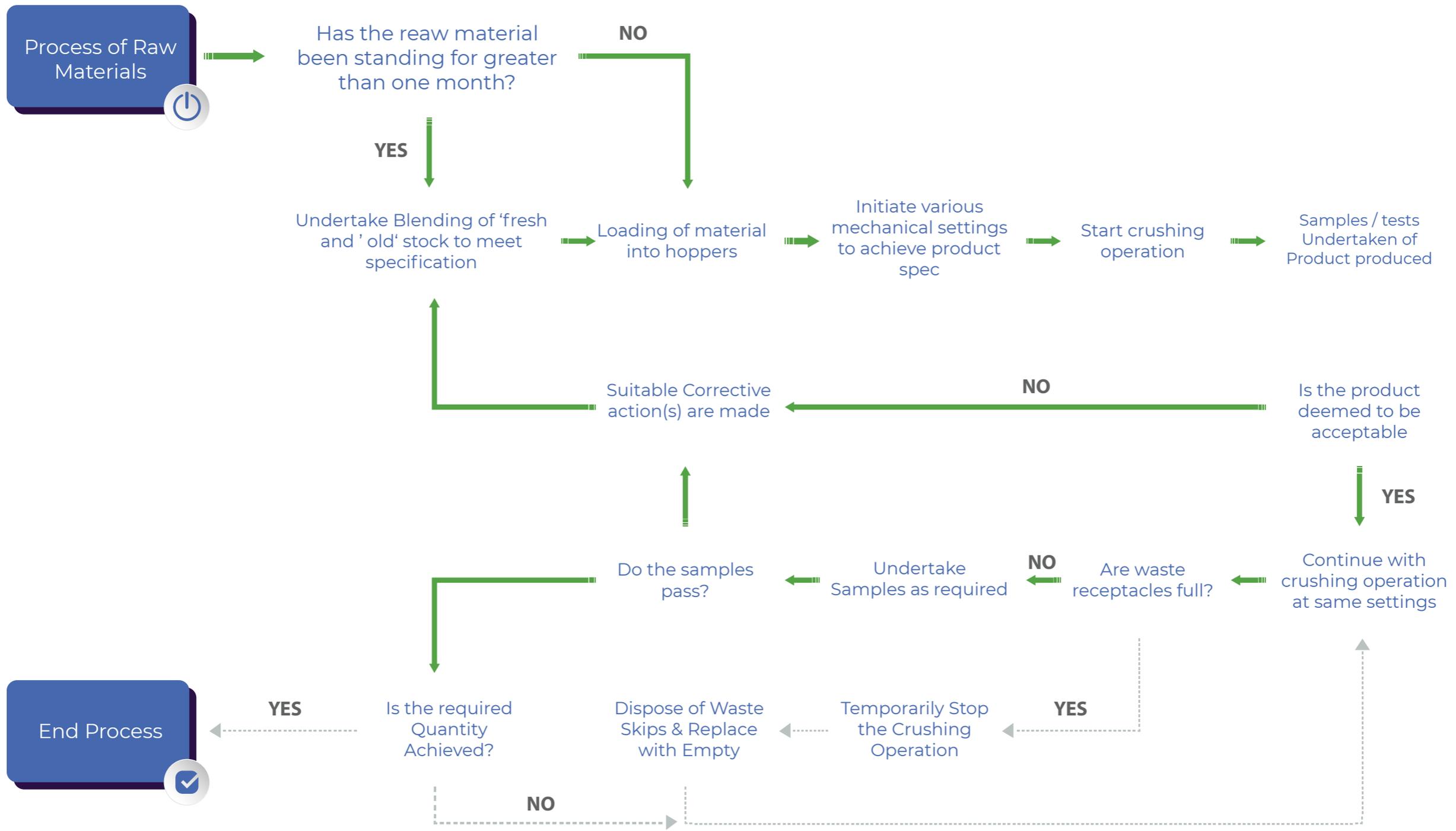
Certificate Comments:

- The Above test result meets the Sub-base requirements for Recycled Crushed Aggregate Sub-base Section 3.2.8 Table 3-18: RCA Sub-base requirements of Page No 3 of 39 Abu Dhabi Quality and Conformity Council (ADQCC) Limit.
- Conformity statement reported with no decision rule applied. Uncertainty of measurement available upon request.

Date Tested: 02-05 January 2022

For and on behalf of Element Materials Technology ME Limited Abu Dhabi - Site Laboratory
Khalid Hassan Hangoover
Site Laboratory Supervisor

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Incoming Material Process Flowchart

Quality Management Plan

The Quality Management Plan (QMP) describes the approach to quality management (QM) on the Project or Operation.
The objectives of the plan are to:

- Provide the framework for how QM processes will be managed to support successful Project delivery and Operational Activities
- Detail how the Project / Operation will ensure compliance with the Al Dhafra Recycling Industries Quality Manual, relevant legislative and contractual requirements
- Communicate roles and responsibilities
- Identify supporting procedures and tools.

Plan Structure

The QMP has the following structure:

Part A

A plan overview that clearly defines:

- Quality Manual Elements and Expectations
- Legislative and Client requirements
- Key performance indicators

Part B

An implementation plan that describes:

- How the Project / Operation will meet each Element and Expectation
- Responsibilities for each Expectation
- The Procedures and Deliverables for each expectation

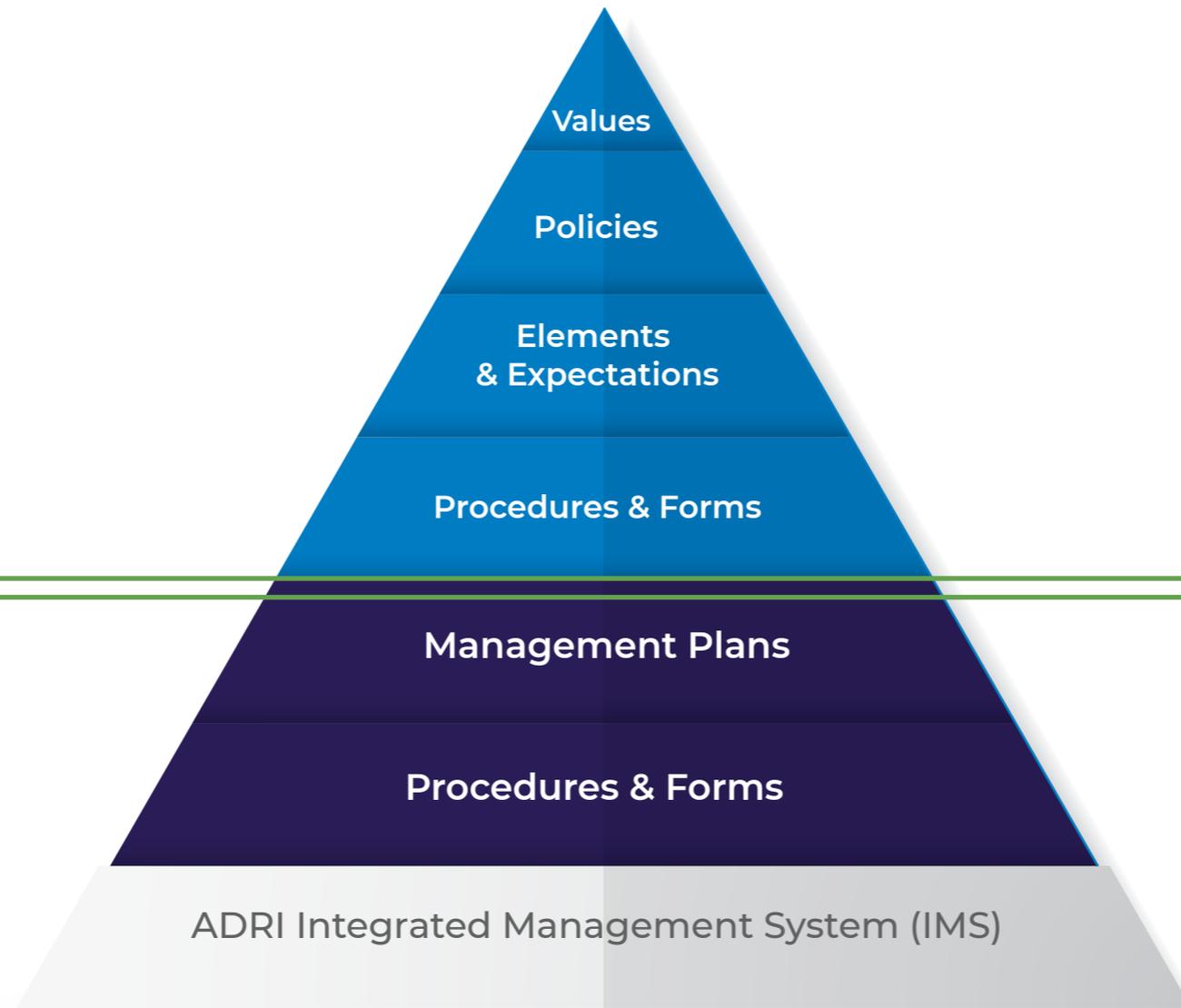
Annexures

Provides the supporting detail behind the methodology and systems used to support the implementation plan

Al Dhafra Recycling Industries Integrated Management System (IMS):

The Al Dhafra Recycling Industries IMS is an integrated set of tools and resources that define how we manage quality, health & safety and environment at all levels of our business. It has the following structure:

Developed by
Corporate Functions



These Elements define the framework standards and resources that apply on all services projects and operations

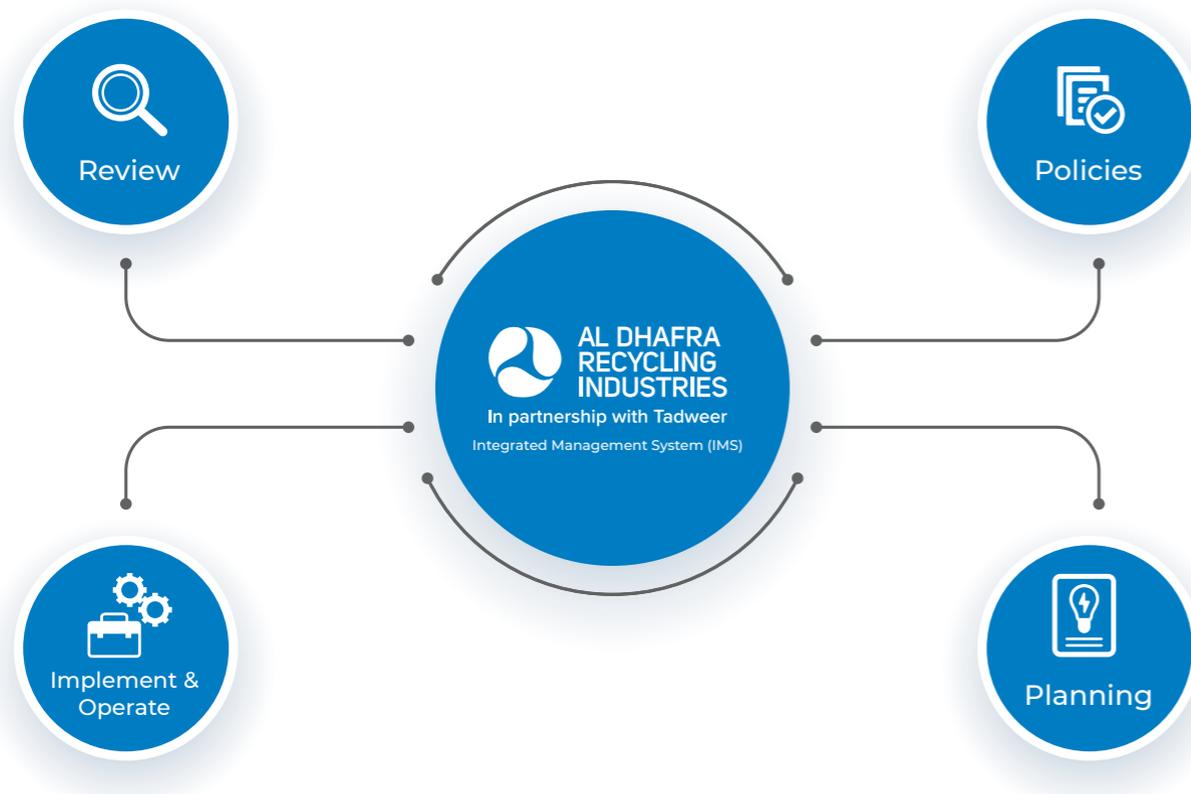
Developed by
Business Stream
or = Project / Operation

The Project or Operation builds elements of the management system to develop a specific management plan and supporting resources as required

Quality Management Plan

Integrated Management System Continuous Improvement

The Al Dhafra Recycling Industries IMS has a continuous improvement mechanism embedded in its Elements:



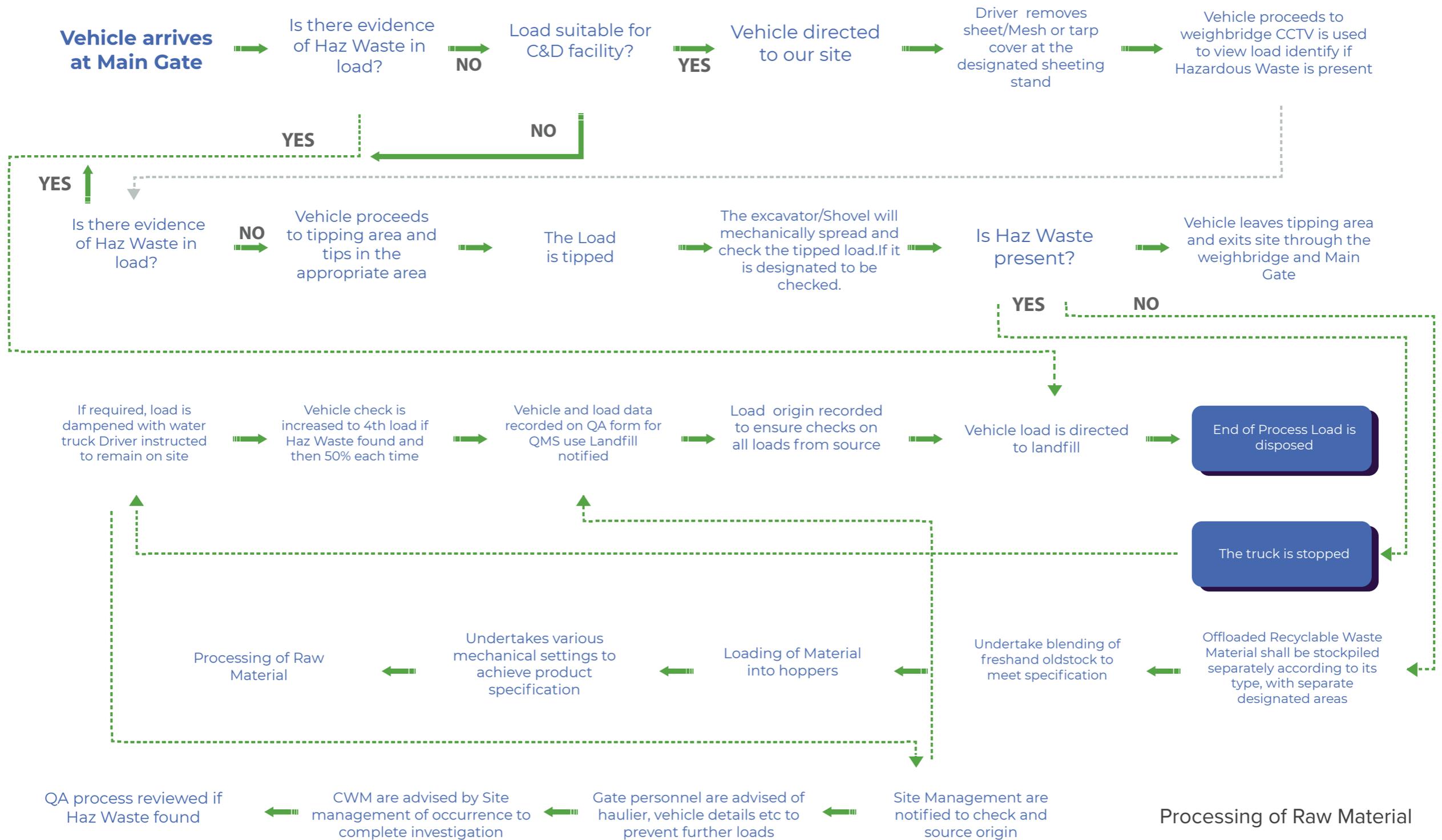
Elements and Expectations

The QMP is based on the Al Dhafra Recycling Industries Quality Manual set of 11 Elements that describe requirements for quality management. Each Element is supported by a short intent statement and a set of expectations or key outcomes to be delivered as part of that Element.

- Element – Key aspects for managing this function on the Project
- Intent – A one-line statement describing the overall purpose of the Element
- Expectation – The high-level outcomes achieved as part of each Element.

This hierarchy provides a consistent structure that is applied across all work management plans, and these elements are:

- Element 1: Leadership, Accountability and Culture
- Element 2: Planning
- Element 3: Product, Materials, Sub-contractors and Suppliers
- Element 4: Work Procedures
- Element 5: Resources, Training, Induction and Competency
- Element 6: Stores and Incoming Goods
- Element 7: Inspection & Testing
- Element 8: Conformity
- Element 9: Document & Record Management
- Element 10: Monitor Process Performance
- Element 11: Audit & Review



Equipments Certification of Calibration

Samples of documents contains information about part of our devices calibration. This certificate provides valuable information on the quality and measurement accuracy of the device.

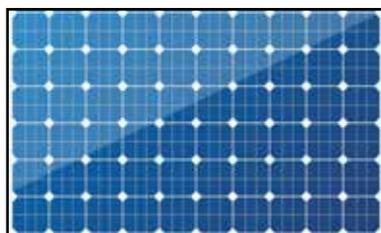




Recognitions and Awards



Recognitions and Awards



HOME / ENERGY

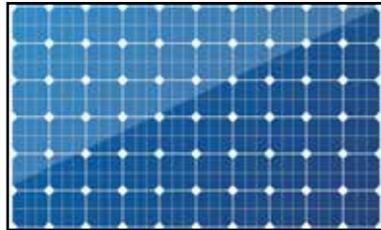
Tadweer opens phase two of solar power plant at Al Dhafra

The Abu Dhabi Waste Management Center (Tadweer) has announced the opening of the second phase of the solar power plant project at the Construction and Demolition Waste Recycling Facility in Al Dhafra region of Abu Dhabi.

Aimed at lowering the facility's carbon footprint, Al Dhafra C&D Waste Recycling Facility, the first of its kind in the world to be 90 per cent solar-powered, is aligned with the country's ambitious plans to mitigate climate change including the UAE Green Agenda Programs (2030-2015) and the National Climate Change Plan of the UAE (2050-2017),

With completion of the second phase, Tadweer, in close coordination with the investor of Al Dhafra C&D Waste Recycling Facility, has significantly enhanced the facility's solar energy utilization by increasing its capacity to 600 kilowatts per hour, up by 350 kilowatts per hour.

In addition to enhancing the facility's operational efficiency, the increased capacity will help lower its carbon footprint by avoiding more than 1,300 tons of carbon emissions, equivalent to planting 4,133 trees, and saving 480,000 liters of diesel on a monthly basis. This will significantly contribute to protecting the emirate's environment and cutting harmful emissions.



HOME / UAE

350kwph solar power added to Abu Dhabi's Al Dhafra recycling facility

To raise the efficiency of the power plant, Tadweer installed 1,656 solar cells at an area covering 11,000 square meters, with a capacity to produce a total 600 kilowatts, equivalent to generating 878,000 kilowatts energy from diesel, saving an annual diesel consumption of up to 480,000 liters. This will help prevent an average of 1,300 tons of carbon emission per year.

As part of its continued efforts to promote sustainable energy at its various facilities, Tadweer has adopted a strategy to increase the use of clean energy sources at its current and future projects, and has outlined ambitious plans to achieve its sustainable objectives.

Khaleej Times Business Energy - On September 7, 2020. Tadweer opens phase two of solar power plant at Al Dhafra C&D waste recycling facility.











Projects



Examples of Live Projects 2022

Project Name	Project Location	Scope of Work
1. P-091 - FIBREX_North Yas Development Yas Living (NOYA 1)	Yas Island	Supply of RCA Ex-plant
2. Hpes-Carleigh School-Koora Sport Center /HPES Al maryah island project	Al Maryah Island	Supply of RCA Ex-plant
3. Riyadh City South Ph.1 -N2- J-262	Riyadh City	Supply of RCA Ex-plant
4. Jubail island & Abu Dhabi projects	Jubail Island	Supply of RCA Ex-plant
5. Improvement Of E11/E12 Intersection Between Al Falah And Al Falah And Al Reef - Section 1 (PA129).	AL Reef	Supply of RCA Ex-plant
6. Construction of roads and infrastructure works at MBZ city	MBZ City	Supply of RCA Ex-plant
7. Walk Ways & Cycle Track in the Al Dhafra Region Cities (P33)	Ruwais+D10:D11-Ghayathi	Supply of RCA Ex-plant
8. Mid field terminal -AUH	Auh-Airport	Supply of RCA Ex-plant
9. Riyadh city north ph-7A / Infrac.works at kizad area A ph.1-d	Riyadh City	Supply of RCA Ex-plant
10. Various projects in Abu Dhabi	Abu Dhabi	Supply of RCA Ex-plant
11. TG2066 - Baniyas North Infrastructure, Streetscape and Vill	Baniyas	Supply of RCA Ex-plant
12. Riyadh City South Phase 2, Neighborhood 4 – Infra	Riyadh City	Supply of RCA Ex-plant

Type of Material

Recycled crushed
Aggregate
Subbase/Base
Course (37.5-0 mm)
(Dry Mix)

Project Name

Project Location

Scope of Work

13. I045 - Riyadh City North Phase 6 (6A & 6B) Infrastructure	Riyad City	Supply of RCA Ex-plant
14. Etihad Rail Network project Stage 2 Package (2c)/Riyadh City South Phase 3 Project	Riyad City	Supply of RCA Ex-plant
15. Riyadh City North - Phase 7B	Riyad City	Supply of RCA Ex-plant
16. Riyadh City South - Phase 4 (Nurol)	Riyad City	Supply of RCA Ex-plant
17. Riyad City South-Ph.01-N3 -NBHH Project /Riyadh City North - Phase 7B/	Riyad City	Supply of RCA Ex-plant
18. Early Works & Site Preparation for Borouge 4 Project	Ruwais	Supply of RCA Ex-plant
19. Qasr Al Sarab Desert Resort Road	Liwa	Supply of RCA Ex-plant
20. Brouge project ruwais	Ruwais	Supply of RCA Ex-plant
21. Infrastructure works at MBZ city /Riyad City South phase -4 nurol- N-10 project.	Riyad City	Supply of RCA Ex-plant
22. Various projects in Abu Dhabi	Abu Dhabi	Supply of RCA Ex-plant
23. Various projects in Abu Dhabi	Abu Dhabi	Supply of RCA Ex-plant
24. Various projects in Abu Dhabi	Abu Dhabi	Supply of RCA Ex-plant

Type of Material

Recycled crushed
Aggregate
Subbase/Base
Course (37.5-0 mm)
(Dry Mix)





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**AL DHAFRA
RECYCLING
INDUSTRIES**

In partnership with Tadweer



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