EMS

Process Description, Management and Controls

Wern Tarw Recycling Ltd **Trading as Shillibiers**

43 Village Farm Industrial Estate
Pyle
Mid Glamorgan
CF33 6NU

Aggregates Recycling Facility

Environmental Permit Number:
EB3430RT / EAWML 100022

Tel: 01656 743755 / 745292
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Document Prepared by	January 2019 Revision 0
Joe Gatley Caldey View Clos Sant Cenydd Llangennith Swansea SA3 1JT **Tel:** 01792 386699 **E-mail:** joe.gatley@gmail.com	**This manual is approved for use by:** Wern Tarw Recycling Ltd
	Name: Leyton Shillibier
	Position: Company Director
	Signed:
	Date:
	Doc Reference: EMS/PDMC/WTR/1

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1 Site Details & Management

1.1 Introduction

1.1.1 Introduction

Wern Tarw Recycling Ltd carry out recycling operations consisting of crushing, screening, storage and transfer of non-hazardous inert and excavation wastes for off-site use or further processing at their Aggregates Recycling Facility at:

- Village Farm Industrial Estate, Pyle, Bridgend, CF33 6NU.

The ***location of the site*** is provided in ***Appendix 1.1 – Site Location Plan***. The soil and recycling operations at the ***Aggregates Recycling Facility*** are carried out under the controls of a ***Bespoke Environmental Permit EPR/EB3430RT (EAWML 100022)***

The ***permitted site boundary*** is provided ***Appendix 1.2 – Site Boundary Plan***.

The ***Bespoke Permit*** issued by Environment Agency Wales (now Natural Resources Wales) in January 2010 allows for the ***Treatment and Transfer of Inert and Excavation Wastes for Recovery or Disposal*** (as specified in Schedule 2 Operations, Table 2.1 of the Permit) of wastes (also specified in Schedule 2 Operations, Table 2.2 of the Permit) within the confines of the permitted site boundary.

Waste aggregates, and soil and stones are delivered to the site and are processed into specified aggregate types and mixtures for off-site uses e.g. in construction of roads and tracks, landscaping and other construction developments or remediation schemes under the controls of a **Factory Production Control System** in compliance with the wrap Quality Protocol for Aggregate Manufacture, which is provided separately in **Appendix – 4** to this **EMS**.

1.2 Document Status

1.2.1 

The information provided in this document aims to provide a ***management plan*** for the permitted operations which describes the processes and operations and how they are managed and controlled to meet the requirements of ***Condition 1 – "General Management"*** of the Environmental Permit and any associated best practices and guidance.

1.2.2 This document (and any other referenced or associated documents to it) provides information to the Operator and to Natural Resources Wales for the management, operation and regulation of the activities carried out at the site.

Any proposed changes to the site, including its' activities or management should be reviewed and discussed with Natural Resources Wales, and where necessary, updated within this document beforehand.

1.2.3 ***This document*** (in any form e.g. electronic or hard copy) ***should remain with the Operator at all times*** during the active & operational status of the site.

1.2.4 This document from time to time ***may be updated*** to reflect best practices and guidance, changes to operations and regulations etc. therefore***, current/updated copies of this document are made available by directly contacting the author, requests for copies of this EMS should be made to:***

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1.2 Site Operator

1.2.1 The Site Operator is:

Wern Tarw Recycling Ltd Limited

Name & Registered Office:
WERN TARW RECYCLING LIMITED
HENDIR UCHAF FARM
RHIWCEILIOG
PENCOED
CF35 6NS
Company No. 05378043

Status: Active
Date of Incorporation: 28/02/2005

Country of Origin: United Kingdom

Company Type: Private Limited Company
Nature of Business (SIC):
39000 - Remediation activities and other waste management services

Accounting Reference Date: 28/02
Last Accounts Made Up To: 28/02/2018 (TOTAL EXEMPTION FULL)
Next Accounts Due: 30/11/2019
Last Confirmation Statement Date: 28/02/2018
Next Confirmation Statement Due: 14/03/2019

Mortgage: Number of charges: 1 (1 outstanding / 0 satisfied / 0 part satisfied)
Last Members List: 28/02/2016

Previous Names:
No previous name information has been recorded over the last 20 years.

UK Establishment Details
There are no UK Establishments associated with this company.

Oversea Company Info
There are no Oversea Details associated with this company.

1.2.2 The Site Contact Details

Mr. Leyton Shillibier: Site Manager and Company Director
Site Office Tel No.: 01656 743755
E-mail : admin@shillibiers.co.uk
Web: www.shillibiers.co.uk/speak-to-us

1.3 Site Location Setting and Environs

1.3.1 The Site Address & Location is:

Wern Tarw Recycling Ltd,
43 Village Farm Industrial Estate,
Pyle,
Bridgend,
Mid Glamorgan
CF33 6NU

NGR: SS 83362 81922

The ***location of the site*** →**O** is provided in ***Appendix 1.1 – Site Location Plan.***

1.3.2 The Site

The ***Site*** is located in the South Easterly portion of the Industrial Estate and is lies approximately 5 kilometres to the North of the town of Porth Cawl and 7 kilometres to the West of the town of Bridgend, and is situated approximately 1 kilometre North from Junction 37 of the M4 Motorway, see ***Figure 1.3.2 - Site Setting*** below:

Figure 1.3.2 - Site Setting

Access to the site is off the A48 at Pyle and into Village Farm Industrial Estate onto Village Farm Road, the site is clearly identified by a notice board which is positioned adjacent to the access road and entrance gates.

Access and ***Permitted Boundary*** of the ***Site*** is provided in ***Appendix 1.2 – Site Boundary Plan***

The Site occupies an ***area of approximately 0.36 hectares*** and consists of an ***open yard area*** with segregated stockpiles of feedstock aggregates and treated product aggregates in ***storage areas are located at the borders of the perimeter of the site, treatment*** (crushing and screening) operations are carried out within these areas ***in the central portion of the site.***

These ***Storage*** and ***Treatment Areas*** are show in ***Appendix 1.3 - Site Layout Plan***.

Site Infrastructure consists of a concreted impermeable surface, where rainfall surface waters from the open yard area drains to & through an interceptor before leaving the site to sewer under a discharge consent granted by Welsh Water.

1.3.3 Site Environs

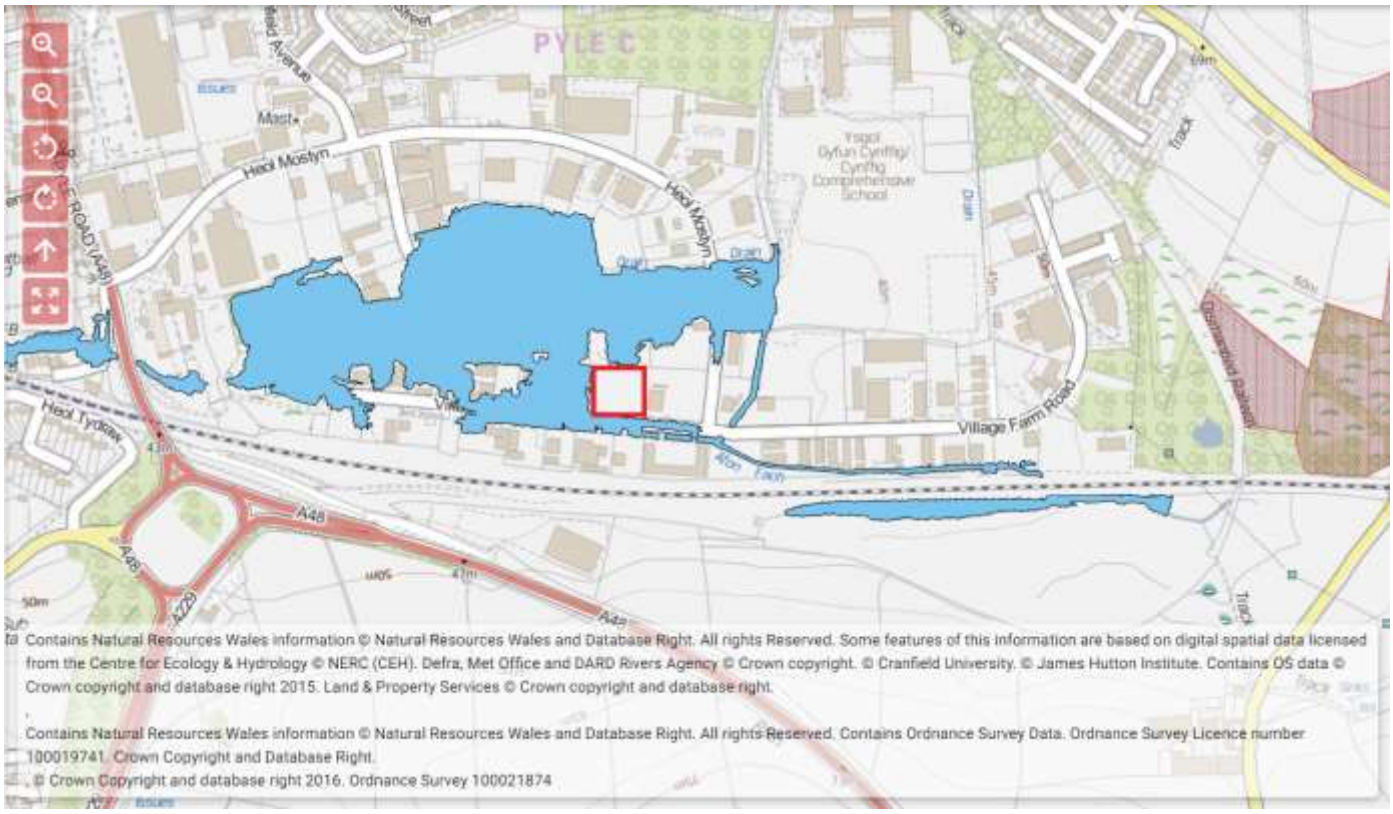
- **Location to Receptors**

The ***[Site]*** (as shown in ***Figure 1.3.3 below***) is immediately surrounded by industrial premises and offices and is ***not located within a designated Flood Risk Area***, however, ***the surrounding areas in close proximity***, mainly to the North, South and West of the ***Site lies within a*** **Flood Zone 3 Area**.

The nearest ***Protected Habitat Site*** is the Peny Castle, Cefyn Crwbwr (SSSI), which is situated approximately ***720 metres to the West of the Site***.

The Site is ***not located on or in a Ground Water Protection, Zone***, and the nearest ***Water Course is the Afon Fach***, which is situated approximately 25 metres South of the Site.

Figure 1.3.3 Site Location and Receptors



1.4 Site Management

1.4.1 ***Staffing*** at the site typically comprises of 2 x Site Managers, 1 x Assistant Site Manager, two Technical Administrators, 2 x Machine Operators, 2 x Mechanics and approximately 10 x Lorry Drivers, their positions and duties are provided *in* ***Appendix 2.1 – Site Management Structure***.

1.4.2 ***Competence and training*** for all site employees is monitored by the Site Managers, a checklist list of training required and completed is kept and maintained in the site office by the Site Managers, which is provided in ***Appendix 2.2 – Training Checklist***.

Updates to existing and new ***Certificates of Competence*** (**WAMITAB**) is undertaken and environmental & waste management refresher ***training is provided by Brightwater Education*** for site management & staff.

Training Records for individual site employees are completed and maintained and are kept in the site office by the Site Manager, which is provided in ***Appendix 2.3 – Training Records***.

1.4.3 ***Environmental risk assessments*** for the site operations are provided in ***Appendix 2.4 – Environmental Risk Assessments***.

1.4.4 **Maintenance** is carried out on plant and equipment deployed at the site for waste treatment and recovery operations. A summary of plant and equipment used for on-site treatment operations is provided below, in ***Table 1.4.4 Itemised Plant and Equipment***.

Table 1.4.4 Itemised Plant and Equipment

Plant/*Equipment	Description	Use
Argo B3	Crusher	Crushing and reducing large slabs and rocks
Novum	Screener	Screening, separating & grading aggregates
Kobelco 140	Excavator	Loading, and moving soils & aggregates
Volvo EC160	Excavator	Loading, and moving soils & aggregates
Doosan DX140	Excavator	Loading, and moving soils & aggregates
Liebherr R922	Excavator	Loading, and moving soils & aggregates
Hyundai 760	Loading Shovel	Moving soils & aggregates
New model tbc	Telehandler	Moving aggregates & attaching equipment
Static Water Spray	20,000lt Water Tank	Dust suppression measures

A ***checklist list for the maintenance of plant*** and equipment and site infrastructure is kept in the site office and maintained by the Site Manager, which is provided in ***Appendix 2.5 – Maintenance Checklist***.

Maintenance Records for plant and equipment and site infrastructure are kept in the site office and maintained by the Site Manager, which is provided in ***Appendix 2.6 – Maintenance Records***.

1.4.5 **Accidents, Incidents and breaches, and complaints** occurring or caused by operations at the site are managed by the site manager and recorded.

Records are kept of the following:

- **Complaints** is provided in ***Appendix 2.7 – Complaints Record***.
- **Incidents and Accidents** is provided in ***Appendix 2.8 – Incidents, Accidents and Non-Conformances***.

- **An Accident Management Plan** is provided separately in ***Appendix 3 – Accident Management Plan*** and is implemented if and when accidents occur to minimise their potential adverse effects and consequences.

1.4.6 **Monitoring of uncontrolled emissions** (i.e. fugitive emissions which are not subject to emission limit values) as likely to have an adverse effect to receptors beyond the site are rectified and recorded as described and provided in ***Appendix 2.9 – Site inspection Checklist***.

1.4.7 ***Records of wastes received and dispatched*** at the site are kept secure by the site manager at the site office, as specified in ***Section 2.6 Records, Reporting and Notifications.***

1.4.8 **Hours of Operation,** typical operational times in accordance with Planning Restrictions are as follows:

Table 1.4.8 Typical Hours of Operation

Days	Operational Times
Monday to Friday	7:00 to 17:00
Saturday	7:30 to 13:00
Sundays and Bank Holidays	Closed

1.4.9 **Security measures** at the site consist of on-site monitoring & CCTV surveillance during and outside operational hours. The site is bordered on 2 sides (South & West) by private woodland and private access is restricted by gates which are kept locked outside operational hours at the site entrance and access road adjoining Pen-y-Turnpike Road.

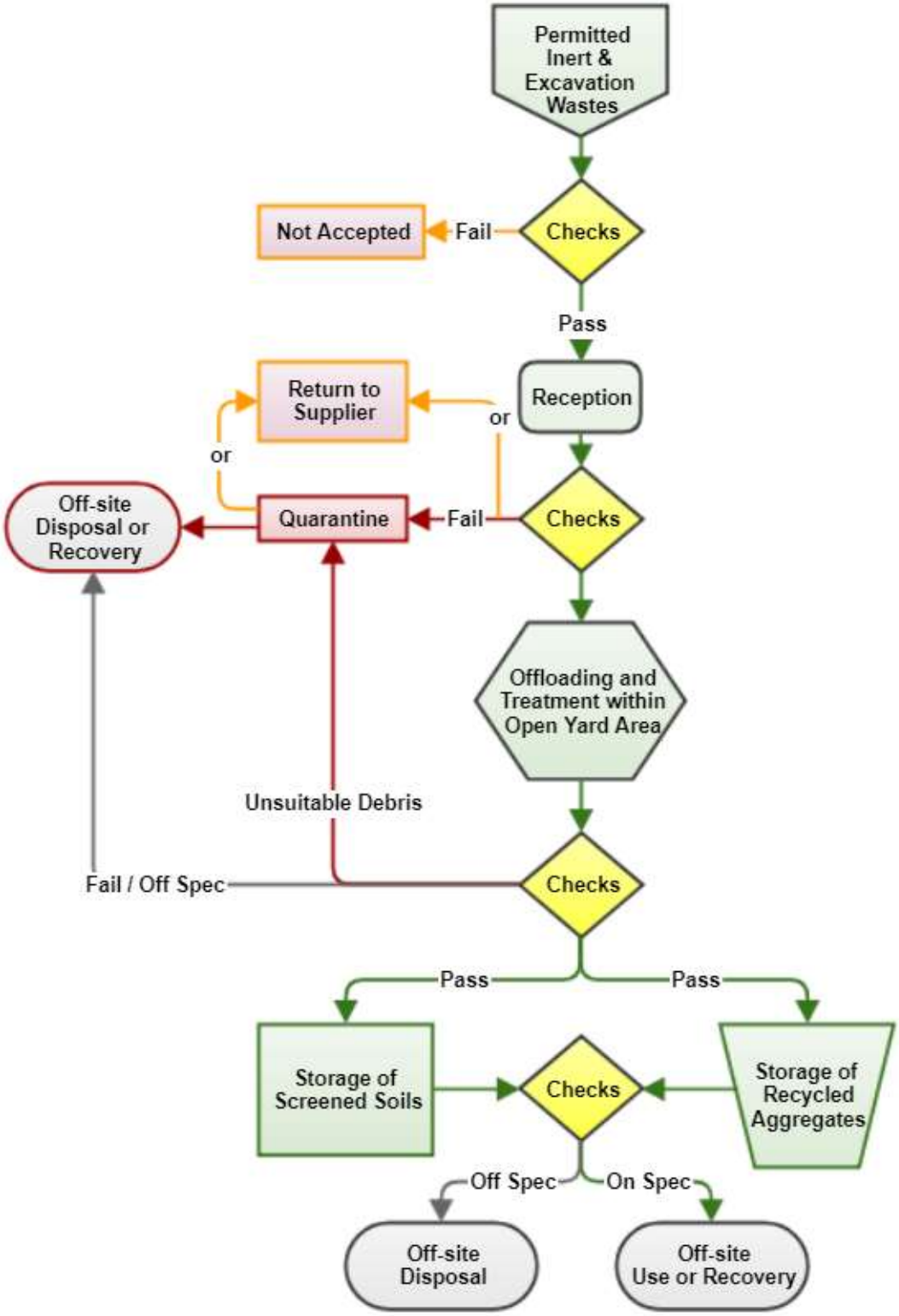
All working areas and site perimeters at the site are within easy visual range for on-going surveillance during working hours by the site staff.

2 Site Operations

2.1 Overview of Operations

The ***permitted waste recovery and disposal*** operations carried out at the site are summarised in ***Figure 2. 1 – Operational Flow Chart*** below:

Figure 2.1 – Operational Flow Chart



2.2. Waste Pre-acceptance Procedures

2.2.1 Prior Checks

Pre-acceptance checks on wastes prior to receipt at the Inert and Excavation Wastes Recycling Facility may comprise of the following:

- Pre-determined specifications and agreements (quotations) with the customer
- Producer visits, waste verification checks and audits
- Completion of ***Appendix 2.10 - Waste Characterisation and Pre-acceptance Form***
- Independent analysis and Site Reports (***Appendix 2.11 - Analysis Request Form***)
- Pre-determined process routes and storage areas for the wastes
- Scheduled dates for receipt.
- Visual checks made by the driver prior to and during unloading (deposit) and loading (dispatch from producer site).
- Records of pre-acceptance checks will be kept at the site office.
- Assessment and classification of soil types T1, T2 & T3 for suitability of processing and end use criteria by referring to ***Threshold Guidelines and / or any other relevant guidance,*** CL AIRE (***https://www.claire.co.uk/information-centre/water-and-land-library-wall/45-model-procedures/187-model-procedures***) ***etc.***

2.2.2 Threshold Guidelines for Soil Contaminants, Initial Assessment for Risk and Classification for Pre-acceptance of wastes

Table 1 and Table 2 (which is used when the relevant end use GACs are exceeded in Table 1) ***below*** are for use as ***guidelines only*** and can be used for the initial assessment and ***classification of wastes for acceptance at the site*** with regard to their suitability for ***acceptance, proposed processing and end uses***.

Table 1 End Use Total Concentrations - Geoenvironmental Guidelines

Tier 1 Tier 2 Tier 3

CONTAMINANT	SOURCE	SOM %	GAC Residential mg/kg	GAC Commercial mg/kg	GAC Allotment mg/kg
METALS					
Antimony	CL:AIRE	n/a	-	7,500	-
Arsenic	SGV	6	32	640	43
Barium	CL:AIRE	n/a	-	22,000	-
Beryllium	LQM	6	51	420	55
Boron	LQM	6	291	192,000	45
Cadmium	SGV	6	10	230	1.8
	LQM	6	(3)	(348)	(0.53)
Chromium III	LQM	6	3,000	30,400	24,600
Chromium VI	LQM	6	4.3	35	2.1
Copper	LQM	6	2,330	71,700	524
Lead	OLD SGV		(450)	(750)	(450)
Mercury - elemental	SGV	6	1	26	26
Mercury - inorganic	SGV	6	170	3,600	80
Mercury - methyl	SGV	6	11	410	8
Molybdenum	CL:AIRE	n/a	-	17,000	-
Nickel	SGV	6	130	1,800	230
Selenium	SGV	6	350	13,000	120
Vanadium	LQM	6	75	3,160	18
Zinc	LQM	6	3,750	665,000	618
BTEX					
Benzene	GAC	1	0.08	28	0.017
Benzene	GAC	2.5	0.16	50	0.035
Benzene	SGV	6	0.33	95	0.07
Toluene (methylbenzene)	GAC	1	119	870	22
Toluene (methylbenzene)	GAC	2.5	270	1,920	51
Toluene (methylbenzene)	SGV	6	610	4,400	120
Ethylbenzene	GAC	1	65	518	16
Ethylbenzene	GAC	2.5	154	1,220	39
Ethylbenzene	SGV	6	350	2,800	90
Xylene -o	GAC	1	45	478	28
Xylene -o	GAC	2.5	106	1,120	67
Xylene -o	SGV	6	250	2,600	160
Xylene -m	GAC	1	44	625	31
Xylene -m	GAC	2.5	103	1,470	74
Xylene -m	SGV	6	240	3,500	180
Xylene -p	GAC	1	42	576	29
Xylene -p	GAC	2.5	98	1,350	70
Xylene -p	SGV	6	230	3,200	160
MTBE	CL:AIRE	1	49	7,900	22
MTBE	CL:AIRE	2.5	84	13,000	43
MTBE	CL:AIRE	6	160	24,000	90

CONTAMINANT	SOURCE	SOM %	GAC Residential mg/kg	GAC Commercial mg/kg	GAC Allotment mg/kg
PAH					
Acenaphthene (AC)	LQM	1	210	85,000	34
Acenaphthene (AC)	LQM	2.5	480	98,000	85
Acenaphthene (AC)	LQM	6	1,000	100,000	200
Acenaphthylene (ACL)	LQM	1	170	84,000	28
Acenaphthylene (ACL)	LQM	2.5	400	97,000	69
Acenaphthylene (ACL)	LQM	6	850	100,000	160
Anthracene (AN)	LQM	1	2,300	530,000	380
Anthracene (AN)	LQM	2.5	4,900	540,000	950
Anthracene (AN)	LQM	6	9,200	540,000	220
Benzo(a)anthracene (BaA)	LQM	1	3.1	90	2.5
Benzo(a)anthracene (BaA)	LQM	2.5	4.7	95	5.5
Benzo(a)anthracene (BaA)	LQM	6	5.9	97	10.0
Benzo(a)pyrene (BaP)	LQM	1	0.83	14	0.6
Benzo(a)pyrene (BaP)	LQM	2.5	0.94	14	1.2
Benzo(a)pyrene (BaP)	LQM	6	1.00	14	2.1
Benzo(b)fluoranthene (BbF)	LQM	1	5.6	100	3.5
Benzo(b)fluoranthene (BbF)	LQM	2.5	6.5	100	7.4
Benzo(b)fluoranthene (BbF)	LQM	6	7.0	100	13.0
Benzo(ghi)perylene (BgP)	LQM	1	44	650	70
Benzo(ghi)perylene (BgP)	LQM	2.5	46	660	120
Benzo(ghi)perylene (BgP)	LQM	6	47	660	160
Benzo(k)fluoranthene (BkF)	LQM	1	8.5	140	6.8
Benzo(k)fluoranthene (BkF)	LQM	2.5	9.6	140	14.0
Benzo(k)fluoranthene (BkF)	LQM	6	10.0	140	23.0
Chrysene (C0, CHR)	LQM	1	6.0	140	2.6
Chrysene (C0, CHR)	LQM	2.5	8.0	140	5.8
Chrysene (C0, CHR)	LQM	6	9.3	140	12.0
Dibenzo(ah)anthracene (DA)	LQM	1	0.76	13	0.76
Dibenzo(ah)anthracene (DA)	LQM	2.5	0.86	13	1.5
Dibenzo(ah)anthracene (DA)	LQM	6	0.90	13	2.3
Fluoranthene (FA)	LQM	1	260	23,000	52
Fluoranthene (FA)	LQM	2.5	460	23,000	130
Fluoranthene (FA)	LQM	6	670	23,000	290
Fluorene (F0, FL)	LQM	1	160	64,000	27
Fluorene (F0, FL)	LQM	2.5	380	69,000	67
Fluorene (F0, FL)	LQM	6	780	71,000	160
Indeno(123cd)pyrene (ID, IP)	LQM	1	3.2	60	1.8
Indeno(123cd)pyrene (ID, IP)	LQM	2.5	3.9	61	3.8
Indeno(123cd)pyrene (ID, IP)	LQM	6	4.2	62	7.1
Naphthalene (N0, NA)	LQM	1	1.5	200	4.1
Naphthalene (N0, NA)	LQM	2.5	3.7	480	9.9
Naphthalene (N0, NA)	LQM	6	8.7	1,100	23.0
Phenanthrene (P0, PHE)	LQM	1	92	22,000	16
Phenanthrene (P0, PHE)	LQM	2.5	200	22,000	38
Phenanthrene (P0, PHE)	LQM	6	380	23,000	90
Pyrene (PY)	LQM	1	560	54,000	110
Pyrene (PY)	LQM	2.5	1,000	54,000	270
Pyrene (PY)	LQM	6	1,600	54,000	620

CONTAMINANT	SOURCE	SOM %	GAC Residential mg/kg	GAC Commercial mg/kg	GAC Allotment mg/kg
TPH Fractions					
Ali EC05-06	LQM	1	30	3,400	740
Ali EC05-06	LQM	2.5	55	6,200	1,700
Ali EC05-06	LQM	6	110	13,000	3,900
Ali EC06-08	LQM	1	73	8,300	2,300
Ali EC06-08	LQM	2.5	160	18,000	5,600
Ali EC06-08	LQM	6	370	42,000	13,000
Ali EC08-10	LQM	1	19	2,100	320
Ali EC08-10	LQM	2.5	46	5,100	770
Ali EC08-10	LQM	6	110	12,000	1,700
Ali EC10-12	LQM	1	93	10,000	2,200
Ali EC10-12	LQM	2.5	230	24,000	4,400
Ali EC10-12	LQM	6	540	49,000	7,300
Ali EC12-16	LQM	1	740	61,000	11,000
Ali EC12-16	LQM	2.5	1,700	83,000	13,000
Ali EC12-16	LQM	6	3,000	91,000	13,000
Ali EC16-35	LQM	1	45,000	1,600,000	260,000
Ali EC16-35	LQM	2.5	64,000	1,800,000	270,000
Ali EC16-35	LQM	6	76,000	1,800,000	270,000
Ali EC35-44	LQM	1	45,000	1,600,000	260,000
Ali EC35-44	LQM	2.5	64,000	1,800,000	270,000
Ali EC35-44	LQM	6	76,000	1,800,000	270,000
Aro EC05-07 (benzene)	LQM	1	65	28,000	13
Aro EC05-07 (benzene)	LQM	2.5	130	49,000	27
Aro EC05-07 (benzene)	LQM	6	280	90,000	57
Aro EC07-08 (toluene)	LQM	1	120	59,000	22
Aro EC07-08 (toluene)	LQM	2.5	270	110,000	51
Aro EC07-08 (toluene)	LQM	6	611	190,000	120
Aro EC08-10	LQM	1	27	3,700	9
Aro EC08-10	LQM	2.5	65	8,600	21
Aro EC08-10	LQM	6	151	18,000	51
Aro EC10-12	LQM	1	69	17,000	13
Aro EC10-12	LQM	2.5	160	29,000	31
Aro EC10-12	LQM	6	346	34,500	74
Aro EC12-16	LQM	1	140	36,000	23
Aro EC12-16	LQM	2.5	310	37,000	57
Aro EC12-16	LQM	6	593	37,800	130
Aro EC16-21	LQM	1	250	28,000	46
Aro EC16-21	LQM	2.5	480	28,000	110
Aro EC16-21	LQM	6	770	28,000	260
Aro EC21-35	LQM	1	890	28,000	370
Aro EC21-35	LQM	2.5	1,100	28,000	820
Aro EC21-35	LQM	6	1,230	28,000	1,600
Aro EC35-44	LQM	1	890	28,000	370
Aro EC35-44	LQM	2.5	1,100	28,000	820
Aro EC35-44	LQM	6	1,230	28,000	1,600
TPH EC44-70	LQM	1	1,200	28,000	1,200
TPH EC44-70	LQM	2.5	1,300	28,000	2,100
TPH EC44-70	LQM	6	1,300	28,000	3,000

CONTAMINANT	SOURCE	SOM %	GAC Residential mg/kg	GAC Commercial mg/kg	GAC Allotment mg/kg
PHENOL					
Phenol	GAC	1	184	-	66
Phenol	GAC	2.5	290	-	135
Phenol	SGV	6	420	3,200	280
Phenol	LQM	1	210	1,100,000	32
Phenol	LQM	2.5	390	1,100,000	60
Phenol	LQM	6	780	1,200,000	120
VOCs- other benzenes					
1,2,4 Trimethylbenzene	CL:AIRE	1	0.35	42	0.38
1,2,4 Trimethylbenzene	CL:AIRE	2.5	0.85	99	0.93
1,2,4 Trimethylbenzene	CL:AIRE	6	2.0	220	2.2
Isopropylbenzene	CL:AIRE	1	11	1,400	32
Isopropylbenzene	CL:AIRE	2.5	27	3,300	79
Isopropylbenzene	CL:AIRE	6	64	7,700	190
Propylbenzene	CL:AIRE	1	34	4,100	34
Propylbenzene	CL:AIRE	2.5	82	9,700	83
Propylbenzene	CL:AIRE	6	190	21,000	200
VOCs - chlorobenzenes					
Bromobenzene	CL:AIRE	1	0.87	97	3.2
Bromobenzene	CL:AIRE	2.5	2.0	220	7.6
Bromobenzene	CL:AIRE	6	4.7	520	18
(Mono) Chlorobenzene (MCB)	LQM	1	0.33	59	5.9
(Mono) Chlorobenzene (MCB)	LQM	2.5	0.73	130	14
(Mono) Chlorobenzene (MCB)	LQM	6	1.70	310	32
1,2 Dichlorobenzene (1,2-DCB)	LQM	1	16	2,100	94
1,2 Dichlorobenzene (1,2-DCB)	LQM	2.5	39	5,100	230
1,2 Dichlorobenzene (1,2-DCB)	LQM	6	91	12,000	540
1,3 Dichlorobenzene (1,3-DCB)	LQM	1	0.29	1.7	0.7
1,3 Dichlorobenzene (1,3-DCB)	LQM	2.5	0.70	1.5	0.61
1,3 Dichlorobenzene (1,3-DCB)	LQM	6	1.70	180	77
1,4 Dichlorobenzene (1,4-DCB)	LQM	1	30	4,500	15
1,4 Dichlorobenzene (1,4-DCB)	LQM	2.5	72	10,000	37
1,4 Dichlorobenzene (1,4-DCB)	LQM	6	167.00	22,000	88
Hexachlorobenzene (HCB)	LQM	1	0.59	48	0.18
Hexachlorobenzene (HCB)	LQM	2.5	1.00	53	0.42
Hexachlorobenzene (HCB)	LQM	6	1.40	55	0.92
Pentachlorobenzene (PeCB)	LQM	1	5.20	650	1.2
Pentachlorobenzene (PeCB)	LQM	2.5	10	770	3.1
Pentachlorobenzene (PeCB)	LQM	6	17	830	7.1
1,2,3 Trichlorobenzene (1,2,3-TCB)	LQM	1	1	110	4.7
1,2,3 Trichlorobenzene (1,2,3-TCB)	LQM	2.5	2.6	270	12
1,2,3 Trichlorobenzene (1,2,3-TCB)	LQM	6	6.1	620	28
1,2,4 Trichlorobenzene (1,2,4-TCB)	LQM	1	1.8	230	31
1,2,4 Trichlorobenzene (1,2,4-TCB)	LQM	2.5	4.5	560	75
1,2,4 Trichlorobenzene (1,2,4-TCB)	LQM	6	11	1,300	180
1,3,5 Trichlorobenzene (1,3,5-TCB)	LQM	1	0.23	24	5
1,3,5 Trichlorobenzene (1,3,5-TCB)	LQM	2.5	0.57	58	12
1,3,5 Trichlorobenzene (1,3,5-TCB)	LQM	6	1.3	140	28
1,2,3,4 Tetrachlorobenzene (TeCB)	LQM	1	12	1,800	4.4
1,2,3,4 Tetrachlorobenzene (TeCB)	LQM	2.5	29	3,200	11
1,2,3,4 Tetrachlorobenzene (TeCB)	LQM	6	62	4,500	26
1,2,3,5 Tetrachlorobenzene (TeCB)	LQM	1	0.49	52	0.38
1,2,3,5 Tetrachlorobenzene (TeCB)	LQM	2.5	1.2	120	0.94

CONTAMINANT	SOURCE	SOM %	GAC Residential mg/kg	GAC Commercial mg/kg	GAC Allotment mg/kg
VOCs - chloroalkanes					
Bromodichloromethane	CL:AIRE	1	0.016	2.1	0.016
Bromodichloromethane	CL:AIRE	2.5	0.03	3.7	0.032
Bromodichloromethane	CL:AIRE	6	0.061	7.6	0.068
Bromoform	CL:AIRE	1	2.8	760	0.95
Bromoform	CL:AIRE	2.5	5.9	1,500	2.1
Bromoform	CL:AIRE	6	13	3,100	4.6
Chloroethane	CL:AIRE	1	8.3	960	110
Chloroethane	CL:AIRE	2.5	11	1,300	200
Chloroethane	CL:AIRE	6	18	2,100	380
Chloromethane	CL:AIRE	1	0.0083	1.0	0.066
Chloromethane	CL:AIRE	2.5	0.0098	1.2	0.13
Chloromethane	CL:AIRE	6	0.013	1.6	0.23
Chloroethene - Vinyl Chloride (VC)	LQM	1	0.00047	0.063	0.00055
Chloroethene - Vinyl Chloride (VC)	LQM	2.5	0.00064	0.081	0.001
Chloroethene - Vinyl Chloride (VC)	LQM	6	0.00099	0.120	0.0018
VOCs - alkanes					
1,2 Dichloroethane (1,2-DCA)	LQM	6	0.014	1.8	0.016
1,1 Dichloroethene (1,1-DCE)	CL:AIRE	1	0.23	26	2.8
1,1 Dichloroethene (1,1-DCE)	CL:AIRE	2.5	0.4	46	5.6
1,1 Dichloroethene (1,1-DCE)	CL:AIRE	6	0.82	92	12
cis 1,2 Dichlororethene (cis 1,2-DCE)	CL:AIRE	1	0.11	14	0.26
cis 1,2 Dichlororethene (cis 1,2-DCE)	CL:AIRE	2.5	0.19	24	0.5
cis 1,2 Dichlororethene (cis 1,2-DCE)	CL:AIRE	6	0.37	47	1.0
trans 1,2 Dichloroethene (trans 1,2-DCE)	CL:AIRE	1	0.19	22	0.93
trans 1,2 Dichloroethene (trans 1,2-DCE)	CL:AIRE	2.5	0.34	40	1.9
trans 1,2 Dichloroethene (trans 1,2-DCE)	CL:AIRE	6	0.7	81	4.0
Dichloromethane (DCM)	CL:AIRE	1	0.58	270	0.1
Dichloromethane (DCM)	CL:AIRE	2.5	0.98	360	0.19
Dichloromethane (DCM)	CL:AIRE	6	1.7	560	0.34
1,2 Dichloropropane (1,2-DCP)	CL:AIRE	1	0.024	3	0.62
1,2 Dichloropropane (1,2-DCP)	CL:AIRE	2.5	0.042	6	1.2
1,2 Dichloropropane (1,2-DCP)	CL:AIRE	6	0.84	12	2.6
Tetrachloroethene (PERC)	LQM	2.5	2.1	290	3.7
Tetrachloroethene (PERC)	LQM	6	4.8	660	8.7
1,1,1,2 Tetrachloroethane (PCA)	LQM	1	0.9	120	0.8
1,1,1,2 Tetrachloroethane (PCA)	LQM	2.5	2.1	260	1.9
1,1,1,2 Tetrachloroethane (PCA)	LQM	6	4.8	590	4.4
1,1,2,2 Tetrachloroethane (PCA)	LQM	1	1.4	290	0.41
1,1,2,2 Tetrachloroethane (PCA)	LQM	2.5	2.9	580	0.89
1,1,2,2 Tetrachloroethane (PCA)	LQM	6	6.3	1,200	2.0
Carbon Tetrachloride	LQM	1	0.018	3	0.16
Carbon Tetrachloride	LQM	2.5	0.039	6.6	0.37
Carbon Tetrachloride	LQM	6	0.089	15	0.85
Trichloroethene (TCE)	LQM	1	0.11	12	0.43
Trichloroethene (TCE)	LQM	2.5	0.22	25	0.95
Trichloroethene (TCE)	LQM	6	0.49	55	2.2
1,1,1 Trichloroethane (1,1,1-TCA)	LQM	1	6.2	700	48
1,1,1 Trichloroethane (1,1,1-TCA)	LQM	2.5	13	1,400	110
1,1,1 Trichloroethane (1,1,1-TCA)	LQM	6	28	3,100	240
1,1,2 Trichloroethane (1,1,2-TCA)	CL:AIRE	1	0.6	94	0.28
Chloroform - Trichloromethane	LQM	6	2.7	370	1.5

CONTAMINANT	SOURCE	SOM %	GAC Residential mg/kg	GAC Commercial mg/kg	GAC Allotment mg/kg
Chlorophenols and Cresols					
2-Chlorophenol	LQM	1	0.87	3,500	0.13
2-Chlorophenol	LQM	2.5	2.0	4,000	0.3
2-Chlorophenol	LQM	6	4.4	4,200	0.7
2,4 Dichlorophenol	LQM	1	0.87	3,500	0.13
2,4 Dichlorophenol	LQM	2.5	2.0	4,000	0.3
2,4 Dichlorophenol	LQM	6	4.4	4,200	0.7
2,4 Dimethylphenol	CL:AIRE	1	19	16,000	3.1
2,4 Dimethylphenol	CL:AIRE	2.5	43	24,000	7.2
2,4 Dimethylphenol	CL:AIRE	6	97	30,000	17
Pentachlorophenol (PCP)	LQM	1	0.55	1,200	0.084
Pentachlorophenol (PCP)	LQM	2.5	1.30	1,300	0.21
Pentachlorophenol (PCP)	LQM	6	2.96	1,400	0.49
Total Cresols (2, 3, 4 methylphenol)	CL:AIRE	6	400	180,000	63
Phthalates					
bis (2 ethylhexyl) phthalate	CL:AIRE	1	280	85,000	47
Butyl benzyl phthalate	CL:AIRE	6	7200	950,000	1,300
Diethyl Phthalate	CL:AIRE	1	120	150,000	19
Diethyl Phthalate	CL:AIRE	2.5	260	220,000	41
Diethyl Phthalate	CL:AIRE	6	570	290,000	94
Di-n-butyl phthalate	CL:AIRE	1	13	15,000	2
Di-n-butyl phthalate	CL:AIRE	2.5	31	15,000	5
Biphenyl	CL:AIRE	1	66	18,000	14
Biphenyl	CL:AIRE	2.5	160	33,000	35
Biphenyl	CL:AIRE	6	360	48,000	83
Carbon Disulphide	LQM	1	0.10	12	4.8
Carbon Disulphide	LQM	2.5	0.20	23	10
Carbon Disulphide	LQM	6	0.44	50	23
2,4 Dinitrotoluene (2,4-DNT)	CL:AIRE	1	1.5	3,700	0.22
2,4 Dinitrotoluene (2,4-DNT)	CL:AIRE	2.5	3.2	3,700	0.49
2,4 Dinitrotoluene (2,4-DNT)	CL:AIRE	6	7.2	3,800	1.10
2,6 Dinitrotoluene (2,6-DNT)	CL:AIRE	1	0.78	1,900	0.12
2,6 Dinitrotoluene (2,6-DNT)	CL:AIRE	2.5	1.7	1,900	0.27
2,6 Dinitrotoluene (2,6-DNT)	CL:AIRE	6	3.9	1,900	0.61
2 Chloronaphthalene	CL:AIRE	1	3.7	390	40
2 Chloronaphthalene	CL:AIRE	2.5	9.2	960	98
2 Chloronaphthalene	CL:AIRE	6	22	2,200	230
Hexachloro-1,3-butadiene	LQM	1	0.21	32	0.25
Hexachloro-1,3-butadiene	LQM	2.5	0.51	69	0.61
Hexachloro-1,3-butadiene	LQM	6	1.20	120	1.4
Styrene	CL:AIRE	1	8.1	3,300	1.6
Styrene	CL:AIRE	2.5	19	6,500	3.7
Styrene	CL:AIRE	6	43	11,000	8.7
Tributyl Tin Oxide (TBTO)	CL:AIRE	1	0.25	130	0.04
Tributyl Tin Oxide (TBTO)	CL:AIRE	2.5	0.59	180	0.1
Tributyl Tin Oxide (TBTO)	CL:AIRE	6	1.3	200	0.24

Table 2 End Use Leachable - Geoenvironmental Guidelines		
Contaminants	**Threshold Trigger Concentration For Planned End Use**	
	Guideline Utilised	**Guideline Value (ug/l)**
Arsenic	EQS Freshwater	50ug/l
Cadmium	EQS Inland	0.25ug/l
Chromium	EQS Freshwater	3.4ug/l
Lead	EQS Inland	7.2ug/l
Mercury	EQS Surface Water	0.75ug/l
Nickel	EQS Surface Waters	15ug/l
Selenium	(PCV)	10ug/l
Copper	EQS Freshwater	10ug/l
Zinc	EQS Surface Water	75ug/l
Boron	EQS Surface Water	750ug/l
Phenols	EQS Freshwater	7.7mg/l
Cyanide	EQS Freshwater	1ug/l
PAH (sum BbF, BkF, BghiP, IDP	0.1ug/l (EQS Surface Water	0.1ug/l
Aliphatic Hydrocarbons (Equivalent Carbon Number)		
EC >C5-6		10ug/l TPH (Total)
EC >6-8		10ug/l TPH (Total)
EC >8-10		10ug/l TPH (Total)
EC >10-12		10ug/l TPH (Total)
EC >12-16		10ug/l TPH (Total)
EC >16-21		10ug/l TPH (Total)
EC >21-35		10ug/l TPH (Total)
Aromatic Hydrocarbons (Equivalent Carbon Number)		
EC >5-7		10ug/l TPH (Total)
EC >7-8		10ug/l TPH (Total)
EC >8-10		10ug/l TPH (Total)
EC>10-12		10ug/l TPH (Total)
EC >12-16		10ug/l TPH (Total)
EC >16-21		10ug/l TPH (Total)
EC >21-35		10ug/l TPH (Total)

Source Descriptions and Notes

CL:AIRE - Contaminated Land : Applications In Real Environments

SGV - Soil Guideline Values by the Environment Agency/DEFRA

LQM - Land Quality Management Ltd, published jointly with the Chartered Institute of Environmental Health (CIEH)

GAC - Derived internally utilising paramters from published SGV.

In order to provide an initial 'screen' to identify elevated levels of contaminants, a Generic Quantitative Risk Assessment (GQRA) has been undertaken using the most appropriate guidance levels, determined by assessment of exposure frequency/duration and the *Critical Receptor*.

Based on the source of the materials, testing process and likely ongoing contaminant concentrations, use as commercial landscaping materials have been deemed the most suitable end use and the guidelines for commercial land use have been utilised accordingly.

It should be noted that ***additional site specific determinands may need to be accounted for, e.g. Asbestos, Japanese Knotweed, etc.*** Soils contaminating unsuitable contaminants e.g. Asbestos or invasive plants are not accepted at the site.

2.3 Waste Acceptance Procedures

2.3.1 Wastes Accepted

Permitted wastes to be accepted at the Facility are reproduced from the current permit and are shown in ***Table 2.3.1 Inert and Excavation Wastes Accepted for Treatment and Transfer*** for the sites' primary purpose of ***Manufacturing Aggregates*** in accordance with wrap ***Appendix 4 – Factory Production Control System.***

Table 2.3.1 Inert and Excavation Wastes Accepted for Treatment and Transfer	
Waste Code	**Description**
17	**CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)**
17 01	**Concrete, bricks, tiles and ceramics**
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and ceramics
17 01 05	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	***Wood, glass and plastic***
17 02 02	Glass
17 03	***Bituminous mixtures, coal tar and tarred products***
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01
17 05	***Soil (including excavated soil from contaminated sites), stones and dredging spoil***
17 05 04	Soil and stones other than those mentioned in 17 05 03
17 05 08	Track ballast other than those mentioned in 17 05 07
20	**MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**
20 02	***Garden and park wastes (including cemetery waste)***
20 02 02	Soil and stones

2.3.2 Exclusions to acceptable wastes

All wastes accepted at the site shall ***exclude*** the following:

- Hazardous items or substances
- Liquids
- Retrievable debris
- Malodours
- Fine dusts and powders capable of causing uncontrolled aerial emissions during deposit and screening
- Invasive plants (e.g. Japanese Knotweed) insects and pests

2.3.3 Arrival of Incoming Waste

All vehicles delivering waste to the site will enter the site via the gates adjoining Village Farm Road and report at the site offices. The site supervisor or manager carries out visual checks on the waste and the accompanying documentation for confirmation that the waste is described adequately, conforms to any pre-acceptance checks and that the waste is permitted for acceptance and processing on-site.

- Non-hazardous wastes must be accompanied by a ***Duty of Care Waste Transfer Note***.
- Waste carriers must be registered and have a valid ***Carriers Certificate*** to carry waste.

The information recorded by the site supervisor or manager is kept at the site office for all waste received at the Facility, which includes:

i. Time and date

ii. Drivers (haulier) details

iii. Waste carrier licence number, Vehicle registration number

iv. The Producer (including address) of the waste

v. Quantity of waste received

vii. The waste description and waste code

viii. Physical nature and packaging/type e.g. bulk, bagged, etc.

ix. Controlled waste transfer note reference number(s**)**

x. Storage area and treatment operation(s) where the waste is to be directed to on-site

Additional information for certain wastes received at the Site may also include:

xi. Pre-acceptance checks and verification against specifications, analysis, reports and agreements where previously made.

xii. Any irregularities with the load, prior to offloading and on inspection after deposit, e.g. contamination, odours, unsuitable debris, hazardous items etc.

Where the waste does not conform and cannot be recovered at the site, the site manager or supervisor should refer to and complete ***Appendix 2.8 – Incidents, Accidents and Non-Conformances***.

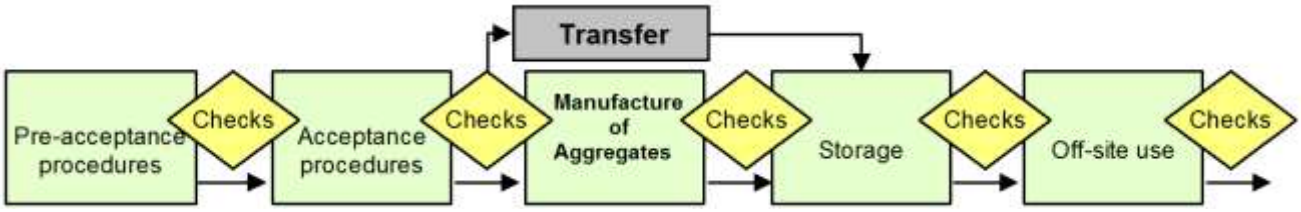
xiii. Controlled waste transfer notes or hazardous waste consignment notes for redirected, rejected or removed wastes.

xiv. Redirected (rejected) waste/loads for alternative off-site treatment/disposal including any instructions/correspondence from Natural Resources Wales.

2.3.4 Waste Acceptance

Quality controls are provided to ensure a high degree of confidence for suitable end use of the manufactured aggregates and is summarised in ***Figure 2.3.4 Quality Controls*** below.

Figure 2.3.4 Quality Controls



Following satisfactory checks and recording the driver is then directed to take the waste to the relevant waste storage and / or treatment or areas described in section ***2.4 Storage Treatment and Dispatch Operations***.

2.3.5 Waste Rejection and/or Quarantine

Unsuitable loads detected arriving at the site following acceptance checks will not be accepted.

If the site supervisor or manager finds any irregularities with the documentation or the waste after deposit then the waste will be either re-loaded back onto the vehicle and rejected from the site or the waste will be quarantined within a designated area (A or C) on site pending further enquiries and completion of ***Appendix 2.8 – Incidents, Accidents and Non-Conformances*** and agreement with or instructions received from the Environment Agency.

Where there are irregularities found e.g. hazardous items, unsuitable debris or heavy contamination found within the waste after deposit the following procedures provided in ***Table 2.3.5 Redirected waste, rejection and quarantine procedures*** will be employed depending on the nature and scale of the issues and risk assessed where appropriate:

Table 2.3.5 Redirected waste, rejection and quarantine procedures	
Irregularity	**Action**
Hazardous or potentially dangerous items 	▪ Notify Natural Resources Wales. ▪ If required and safe (risk assessed) to do so, wear appropppriate PPE before handling. ▪ Contain and isolate the waste, shut off drains and remove to a sealed and enclosed skip or container for off-site disposal as potential hazardous waste. ▪ Clean any affected surfaces and drains. ▪ Place absorbents and / or contaminated items or debris from affected areas in a sealed container(s). ▪ Dispose of as Hazardous waste using consignment notes to an authorised off-site facility.
Odorous waste 	Remove solids to a sealed and enclosed skip for off-site disposal ▪ Clean affected surfaces & remove any contamination to land
Unsuitable debris	▪ Remove debris to an enclosed skip for off-site recovery or disposal

Notifications to and further advice from **Natural Resources Wales** can be made on the following numbers:

- Incident Hotline, **Tel: 0300 065 3000**
- **Web**: .https://naturalresources.wales/about-us/contact-us/general-enquiries/?lang=en

2.4 Waste Storage, Treatment & Dispatch

2.4.1 Site Operations

♦ **Receipt of Waste**

Deliveries of inert and excavation wastes to the site are ***pre-arranged and sourced*** for determining aggregate type & manufacturing specifications. Loads received ds are typically delivered in 20 tonne bulk tippers

Vehicles arriving at the site enter via the site access gates that adjoin Village Farm Road, and following satisfactory checks at reception and site offices, are allowed through the permitted site entrance gates for unloading.

Loads are directed by operational site staff to unload the waste within the designated area(s) of the site as shown in ***Appendix 1.3*** – **Site Layout Plan.**

♦ **Checks on Arriving Waste**

All waste arriving at the site undergo documentation checks, visual inspection and recording as described in ***Section 2.3 Waste Acceptance***.

♦ **Offloading and Storage**

Vehicles delivering wastes for aggregate manufacture are directed to a discrete area or existing stockpile within the open yard areas.

Aggregates manufactured from crushing and or screening operations are stored within discrete stockpiles within the open yard areas pending testing, classification and dispatch for off-site for off-site use or recovery.

Aggregate processing and is carried out in accordance with wrap ***Appendix 4*** – ***Factory Production Control System.***

Screened soils or other sourced fine soils, sands and road plannings for off-site recovery are stored separately to manufactured aggregates and the feedstock-piles awaiting on-site treatment.

♦ Treatment Operations & Dispatch

Aggregates manufactured from Inert and Excavation Wastes undergo ***crushing and/or screening*** operations within the central portion of the open yard area to produce sorted aggregates into their specific particle sizes & grades for off-site sale & use in appropriate construction and development schemes.

Manufactured aggregates are carried out to order/customer demand, once their suitability for end use has been confirmed, the aggregates are then removed and loaded onto vehicles for off-site delivery and use, ***non-waste recycled aggregates for supply*** are tested and documented in accordance with the wrap ***Quality Protocol for Recycled Aggregates,*** further information is provided in ***Appendix 4 – Factory Production Control System.***

Stones, grits, soils and sand can be produced as a ***useful by-product*** from the manufacture of aggregates during crushing and screening operations.

Products and by-products which have been produced from the manufacturing and treatment operations that do not meet the quality protocols, or are surplus to customer demand are dispatched off-site for other recovery operations or beneficial disposal (e.g. landfill cover or temporary haulage roads) uses etc. in accordance with the ***Waste Hierarchy*** principles.

2.5 Management Controls

The following list of **M**anagement **S**ystems documents for the permitted operations are to be put in place (***Appendix 3 - Accident Management Plan***) for the waste operations carried out at the Aggregates Recycling Facility operated by Wern Tarw Recycling Ltd:

MS 1 Accident Management Plan

A. The plan identifies events or failures that could damage the environment

The following relevant factors are identified:

- Unloading and spillages from loss of containment of wastes
- Vandalism
- Fires

B. The plan assesses how likely accidents are likely to happen and the potential environmental consequences

The following assessment criteria are used:

- Probability: how often is this likely to occur?
- What gets out and how much?
- Where would it go – i.e. what or whom would be affected?
- And how would it get there – i.e. pathway by air, along site surfaces etc.
- What would the consequences be?

C. The plan contains actions to minimise the potential causes and consequences of accidents:

The following site controls are to be used:

- Storage of wastes in designated areas
- Barriers to prevent vehicles from damaging equipment & oil tanks
- Maintain primary and secondary containment
- Maintain security fencing and locked gates to minimise the risk of unauthorised access
- Keep a log of all incidents and near-misses
- Maintain and keep appropriate equipment to limit the consequences of an accident e.g. spillage equipment and absorbents
- Site instructions and responsibilities on how (and by whom) each accident scenario should be managed

D. The plan contains actions if an accident happens

- Implementing the accident management plan.
- Investigation of the cause of accident
- Recommended actions to prevent reoccurrence
- Reviewing the plan periodically and after each accident
- Notifying the Environment Agency and other relevant Authorities, e.g. Fire Authority, HSE, Police, etc.

MS 2 Skills and training

All operational staff and managers are suitably skilled & trained, a list as provided in ***Appendix 2 - Management***, ***2.2 & 2.3 - Training Checklist & Records*** for each staff member is keep at the Site Office. Copies of relevant site operating instructions including a copy of the permit, process description, management and controls are also kept readily available at the site and within the site office for operational staff.

MS 3 Site reconnaissance checks

During operational periods, daily, weekly, monthly and annual checks are made by the site supervisor to inspect waste storage areas, site surfacing, site perimeter & security. Checks carried out are recorded as provided in ***Appendix 2 - Management***, ***2.9 - Site Inspection Checklist*** and any defects detected and necessary repairs made are also recorded.

MS 4 Controls to prevent fugitive emissions

Simple H1 Part 1 environmental risk assessments provided in ***Appendix 2 - Management***, ***2.4 - Environmental Risk Assessment***, shows that there are no serious issues with regards to fugitive emissions being generated from site operations which are capable of causing harm, pollution, nuisances or detriment to the local amenity beyond the site boundary.

The following management controls to ensure that fugitive emissions are adequately prevented or minimised (insignificant) are as follows:

- **Measures to prevent emissions to surface and controlled waters and land and groundwater**

i. All waste reception, treatment and storage operations to be carried out within the designed areas on the site.

ii. Keep absorbents readily available on-site (absorbents / sand) and spill kits for use in containing any spillages.

- **Measures to prevent emissions to air**

i. Stockpiles to be stored fully within the confines of the site boundary each stockpile to be kept below 4 meters to prevent excessive wind erosion.

ii. Stockpiles containing soils, sands or fine grit within the bays to be protected or covered during periods of prolonged dry weather and/or high winds.

iii. Screening activities not to be carried out during high wind speeds, to prevent nuisance of wind-blown dusts.

iv. Spray damping system employed & damping of site surfaces & site roads.

v. Mechanical brush deployed or road sweeper employed to sweep site surfaces and roads clean.

The following ***Beaufort Scale in Table 2.5.1*** below provides wind speeds and descriptions as ***''Guidance'' for Control Measures***.

Table 2.5.1 BEAUFORT SCALE: Specifications and equivalent speeds for use on land

FORCE	EQUIVALENT SPEED 10 m above ground		DESCRIPTION	SPECIFICATIONS FOR USE ON LAND
	miles/hour	knots		
0	0-1	0-1	Calm	Calm; smoke rises vertical
1	1-3	1-3	Light air	Direction of wind shown by smoke drift, but not by wind vanes.
2	4-7	4-6	Light Breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind.
3	8-12	7-10	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag.
4	**13-18**	**11-16**	**Moderate Breeze**	**Raises dust and loose paper; small branches are moved.**
5	19-24	17-21	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets form on inland waters.
6	25-31	22-27	Strong Breeze	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.
7	32-38	28-33	Near Gale	Whole trees in motion; inconvenience felt when walking against the wind.
8	39-46	34-40	Gale	Breaks twigs off trees; generally impedes progress.
9	47-54	41-47	Severe Gale	Slight structural damage occurs(chimney-pots and slates removed).
10	55-63	48-55	Storm	Seldom experienced inland; trees uprooted; considerable structural damage occurs.
11	64-72	56-63	Violent Storm	Very rarely experienced; accompanied by wide-spread damage.
12	73-83	64-71	Hurricane	

Table 2.5.2 provides highlighted ***key coloured action levels*** for on-site operations to prevent fugitive emissions occurring.

Table 2.5.2 Key coloured action levels
Operations are carried out under normal conditions
Spray damping is deployed or Screening operations are not to be carried out
Screening operations are not to be carried out, Spray damping is deployed or Stockpiles to be covered / protected to prevent prolonged wind erosion
Site operations cease and are only to be carried under emergency maintenance situations when safe and if necessary

- **Measures to prevent dust, mud and litter**

i. Keep site surfaces clean by scraping or sweeping.

ii. Ensure skip containing unsuitable debris & litter is kept closed.

iii. Retrieve loose litter or debris at the end of each working day.

iv. Maintenance and cleaning vehicles leaving the site.

- **Measures to prevent substances introduced into the environment by pests**

i. Daily inspection and site reconnaissance carried out by the site supervisor.

ii. Removal of unsuitable debris found in stockpiled wastes into enclosed skip.

iii. On detection of infestation of pests, insects, scavengers or vermin, professional pest controllers are to be employed directly and without delay.

- **Measures to prevent odour**

i. Odorous consignments are not accepted at the site (→***Pre-acceptance & Acceptance Procedures***) and are redirected for off-site disposal.

ii. Odorous wastes detected on-site are to be contained and removed immediately for off-site disposal.

iii. Removal of any biodegradable/putrescible wastes from stockpiled wastes into enclosed skip.

iv. Investigating and responding to any odour complaints received.

- **Measures to prevent noise & vibration**

i. Receipt of wastes and Crushing & Screening Operations to be carried out within normal operating hours.

ii. Ensure that all plant and equipment has regular maintenance checks.

iii. Site vehicles silencers are regularly serviced and maintained.

iv. Investigating and responding to any noise or vibration complaints received.

v. Periodic noise monitoring to be carried out at the site boundaries.

MS 5 Maintenance checklist and maintenance records

A maintenance schedule and maintenance records is keep at the Site Office as provided in ***Appendix 2 - Management***, ***2.5 & 2.6 - Maintenance Checklist & Records***.

2.6 Records, Reporting & Notifications

2.6.1 The following **records** will be made at the facility

- **Wastes received**

i. Time and date
ii. Drivers details
iii. Vehicle registration/fleet identity number
iv. The area(s) and location of drains that have been emptied
v. Quantity of waste received
vi. The LoW code and description
vii. Physical nature
viii. Pre-acceptance checks (risk areas, checks and sampling) ***Appendix 2.10 - Waste Characterisation & Pre-Acceptance*** & ***Appendix 2.11 – Analysis Request Form.***
ix. Any irregularities with the load, prior to offloading and on inspection after deposit, e.g. contamination, odours, unsuitable debris, hazardous items etc.
x. Redirected (rejected) waste/loads for alternative off-site treatment/disposal
xi. Controlled waste transfer notes or hazardous waste consignment notes for redirected, rejected or removed wastes

- **Wastes dispatched**

xii. Time and date
xiii. Drivers details
xiv. Vehicle registration/fleet identity number
xv. The destination of the waste
xvi. The local authority destination code
xvii. Quantity
xviii. The LoW code and description
xix. Physical nature
xx. Controlled waste transfer notes or hazardous waste consignment notes for redirected, rejected or removed wastes
xxi. The receiving site permit or number or exemption details
xxii. Waste carrier licence number (for third party carriers only)

- **Manufactured Aggregates**

To include the ***relevant*** details above for wastes dispatched, but also including:

xxiii. Sample date
xxiv. Analysis date
xxv. Analysis reference number
xxvi. Classification & Type
xxvii. Intended use
xxviii. Any additional information/reports

2.6.2 The following ***notifications and reports*** will be made to the Environment Agency without delay:

- ***Quarterly returns*** for wastes received and dispatched.
- ***Any malfunction, breakdown or failure*** of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution.
- Any ***breach*** of a limit specified in the ***permit***.
- Any ***significant adverse environmental*** and health ***effects***.
- ***Records of complaints, pollution incidents or breaches of the permit*** and the actions that have been or are intended to be taken to deal with them.

2.6.3 Site Notice Board

A site notice board will be displayed at the site entrance and will contain the following information:

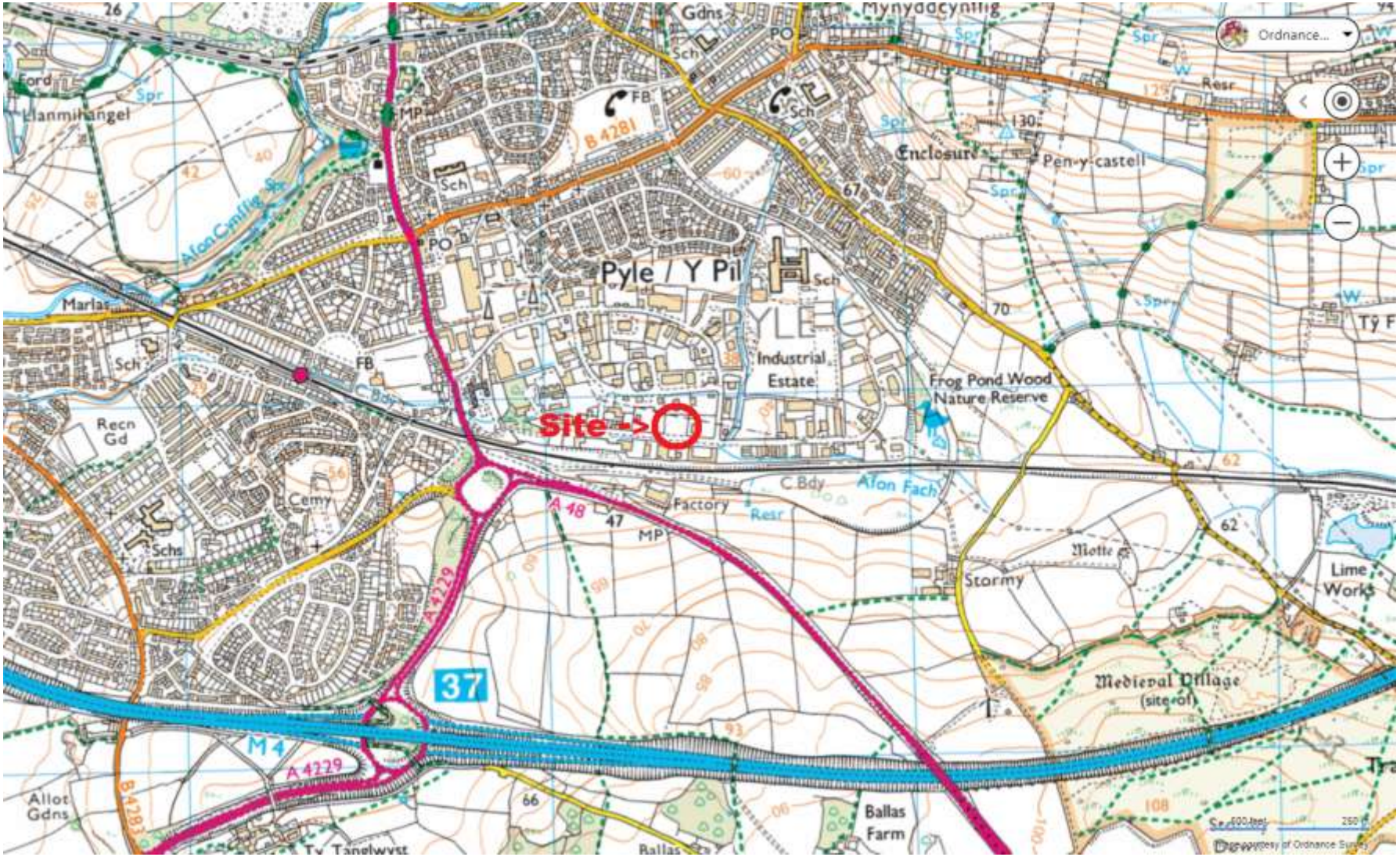
Table 2.6.3 Site Notice Board Details	
Facility Name:	Aggregates Recycling Facility
Facility type:	Inert and Excavation Waste Transfer and Treatment Facility
Operator:	Wern Tarw Recycling Ltd
Contact Details;	Tel. No.: 01656 743755 Web:www.shillibiers.co.uk
Emergency Contact;	Site Manager
This permitted facility is authorised by Natural Resources Wales	
Permit number EPR/EB3430RT	
Natural Resources Wales	Tel. No.: 0300 065 3000

End.

Appendix 1 – Site Plans

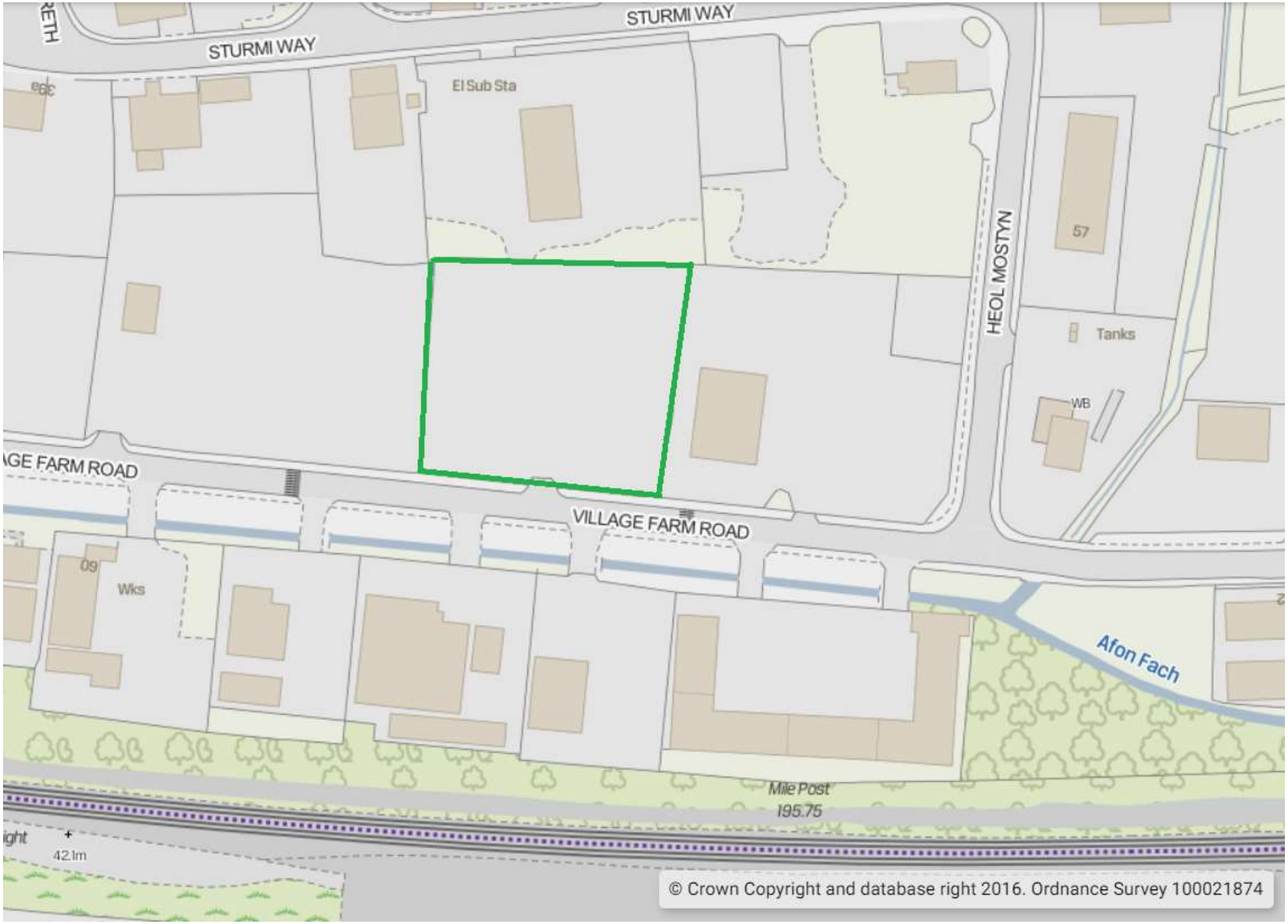
1.1 – Site Location Plan

NGR: SS 83362 81922 **X (Easting):** 283362, **Y (Northing):** 181922 **Latitude:** 51.524133, **Longitude:** -3.6826373



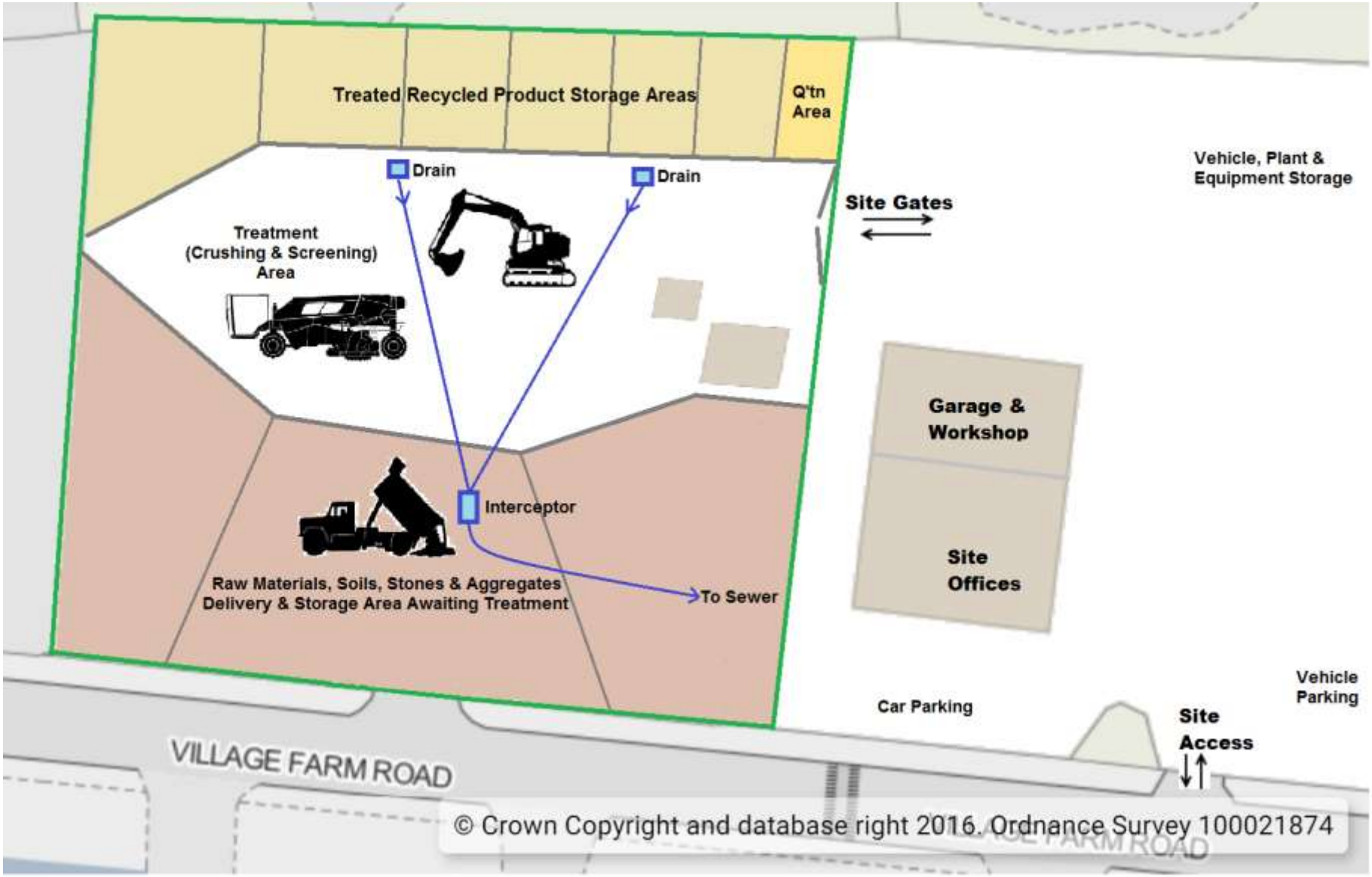
Appendix 1 – Site Plans

1.2 – Site Boundary Plan



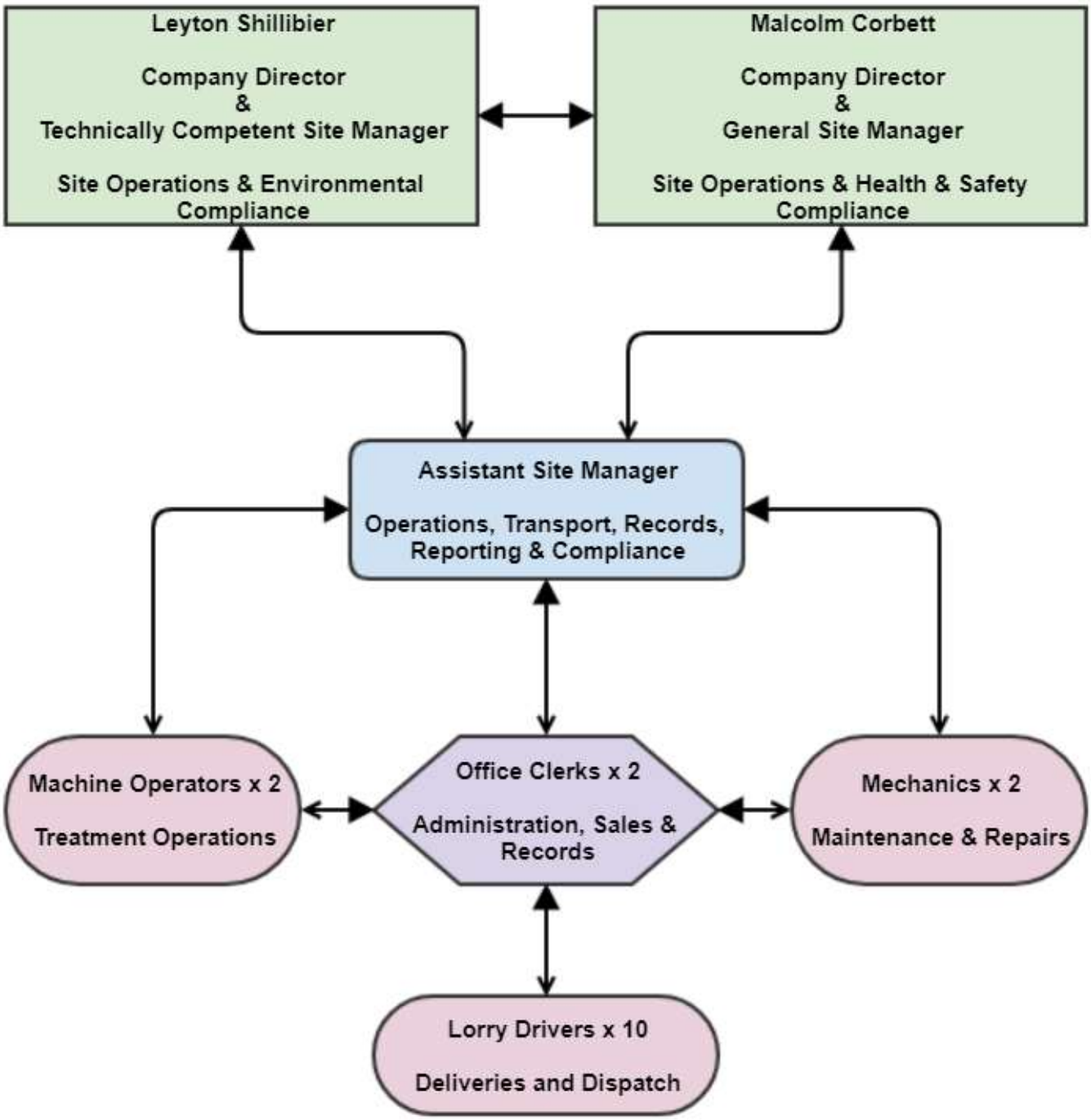
Appendix 1 – Site Plans

1.3 – Site Layout Plan



Appendix 2 – Management

2.1– Site Management Structure



Appendix 2 – Management

2.2 - Training Checklist

JOB	TRAINING REQUIRED (tick boxes to show who needs which training)																	COMMENTS
	Environmental Awareness							Maintenance and Operations						Accidents and Emergency					
	NVQ / WAMITAB	*WAMITAB Continuing Competence	Waste Treatment and Storage / WRAP QP	Environmental and Permit Awareness	*	*	*	Maintenance of Plant and Equipment	Operation of Plant and Equipment	**	*	*	*	*Site Safety	*First Aid	*	*	*	
Site Manager(s)																			
Operation Manager(s)																			
Admin / Office Clerks																			
Operatives & Drivers																			

* Add as required

Appendix 2 – Management

2.4 – Environmental Risk Assessments

H1 Environmental Risk Assessment for Fugitive Emissions

Fugitive Emissions Risk Assessment and Management Plan						
Site operations and potential targets			**Risk management measures**	**Assessing the risk**		
Hazard	**Pathway**	**Receptor**		**Probability of exposure**	**Consequence**	**Overall level of risk?**
To Air Dust from off-loading, reloading, crushing and screening operations.	Airborne particulates transported by the wind	Adjacent Industrial Premises on the Industrial Estate. Public using Footpaths and Roads on the Industrial Estate.	***EMS - 2.3 - Waste Acceptance Procedures*** Dry dusty wastes are not accepted for processing. ***EMS - 2.5 - Management Controls*** Dust suppression systems (spray damping) employed if necessary. ***Appendix 2 –Management*, *2.9 - Site Inspection Checklist*** Weather conditions monitored, evidence for dusts generated beyond the site are monitored & checked.	Possibility of occurrence is low	Possible annoyance of dusts affecting: 1. Pedestrians & Road users. 2. Adjacent Industrial Premises	Low

Fugitive Emissions Risk Assessment and Management Plan						
Site operations and potential targets			**Risk management measures**	**Assessing the risk**		
Hazard	**Pathway**	**Receptor**		**Probability of exposure**	**Consequence**	**Overall level of risk?**
To Water Run-off of polluting leachate from waste treatment and storage areas	Site surfaces	Road Drains and Afon Fach appx 25 metres South of the Site. Groundwater beneath the site.	***EMS - 2.3 - Waste Acceptance Procedures*** Only inert or non-polluting uncontaminated wastes are accepted. Operations are carried out in designated areas within a sealed drainage system. ***Appendix 2 –Management***, ***2.5 & 2.6 - Site Maintenance*** Check Interceptor, clean out drains and silt traps regularly. Repair cracks & damages to impermeable concreted site surface ***Appendix 2 –Management***, ***2.9 - Site Inspection Checklist*** Site surfaces are swept and kept clean.	Possibility of occurrence is very low	Pollution to Afon Fach Pollution to groundwater.	Insignificant

Fugitive Emissions Risk Assessment and Management Plan						
Site operations and potential targets			**Risk management measures**	**Assessing the risk**		
Hazard	**Pathway**	**Receptor**		**Probability of exposure**	**Consequence**	**Overall level of risk?**
Pests Infestation of flies or scavengers (e.g. rats) in the waste	Degradable (e.g. food) wastes stored within the site	Adjacent Industrial Premises on the Industrial Estate. Public using Footpaths and Roads on the Industrial Estate.	***EMS - 2.3 - Waste Acceptance Procedures*** Degradable wastes which are capable of attracting vermin are not accepted or processed. Degradable fractions which are capable of attracting vermin that are found within the waste are removed and stored in a covered skip for off-site treatment or disposal. ***Appendix 2 –Management***, ***2.9 - Site Inspection Checklist*** Checks for pests and vermin. Pest control measures	Possibility of occurrence is very low	Spread of diseases and damage to property	Insignificant

Fugitive Emissions Risk Assessment and Management Plan						
Site operations and potential targets			**Risk management measures**	**Assessing the risk**		
Hazard	**Pathway**	**Receptor**		**Probability of exposure**	**Consequence**	**Overall level of risk?**
Litter Litter and light wastes within receiving waste • Unloading • Loading • Storage • Crushing • Screening	Airborne litter and light wastes transported by the wind	Adjacent Industrial Premises on the Industrial Estate. Public using Footpaths and Roads on the Industrial Estate.	***EMS - Figure 2.1 & 2.3 - Waste Acceptance Procedures*** Wastes containing visually detectable amounts of litter and debris are not accepted for treatment. Debris found within the waste during storage & treatment is removed stored in covered skip for off-site recovery or disposal. ***Appendix 2 –Management, 2.9 - Site Inspection Checklist*** Storage and Treatment to be carried out within designated areas of the site. Visual inspections on & off-site. Retrieval of litter & stored in covered skip for off-site recovery or disposal.	Possibility of occurrence is low	Accumulation of litter outside the site boundary	Low

Fugitive Emissions Risk Assessment and Management Plan						
Site operations and potential targets			**Risk management measures**	**Assessing the risk**		
Hazard	**Pathway**	**Receptor**		**Probability of exposure**	**Consequence**	**Overall level of risk?**
Mud Mud from storage and treatment areas	Tracking of dust and debris from the site onto roads and into surface water drains.	Adjacent Industrial Premises on the Industrial Estate. Public using Footpaths and Roads on the Industrial Estate. Vehicular traffic on Pen-y-Turnpike Road Surface waters & road drains.	***EMS - 2.3 - Waste Acceptance Procedures*** Soils sludges and liquids are not accepted. ***EMS - 2.4 - Waste Storage, Treatment and Dispatch*** Operations are carried out within designated areas. ***EMS - 2.5 - Management Controls*** Mechanical sweeper deployed if & when necessary. Use and maintenance of Wheel Wash for vehicles leaving the site. ***Appendix 2 –Management, 2.9 Site Inspection Checklist*** Site surfaces and access are swept regularly and kept clean	Moderate	Accumulation of mud outside the site boundary	Low

Fugitive Emissions Risk Assessment and Management Plan						
Site operations and potential targets			**Risk management measures**	**Assessing the risk**		
Hazard	**Pathway**	**Receptor**		**Probability of exposure**	**Consequence**	**Overall level of risk?**
Noise and Vibration Noise and vibration from vehicular traffic on-site Noise and Vibration from waste Crushing and Screening operations	Air - wind direction, and; Land – transmission of vibrations	Adjacent Industrial Premises on the Industrial Estate. Public using Footpaths and Roads on the Industrial Estate.	***EMS - 1.4 - Site Management procedures*** Operations are carried out within designated periods. ***Appendix 2 –Management, 2.5 - Maintenance Checklist*** ***2.6 - Maintenance Records*** Plant Maintenance Schedules. Cessation of operations and re-hire or replacement with suitably noise abated plant ***2.9 - Site Inspection Checklist*** On-site daily auditory monitoring by the site manager ***2.7 – Complaints Record*** Monitor complaints and action them, Implementation of noise prevention minimisation and control measures and Management Plan if necessary.	Frequency and possibility of occurrence is low to moderate	Possible annoyance of noise and vibration affecting adjacent premises and public using the footpaths for a short duration during intermittent operations during working hours	Low

Fugitive Emissions Risk Assessment and Management Plan						
Site operations and potential targets			**Risk management measures**	**Assessing the risk**		
Hazard	**Pathway**	**Receptor**		**Probability of exposure**	**Consequence**	**Overall level of risk?**
Odours Smells/odours generated from odorous wastes accepted	Odours transported by the wind	Adjacent Industrial Premises on the Industrial Estate. Public using Footpaths and Roads on the Industrial Estate.	***EMS - 2.3 Waste acceptance procedures*** Malodorous wastes are not accepted. Rejection or removal of non-permitted wastes found within loads or deposited wastes for off-site treatment/disposal ***EMS - Figure 2.1*** Unsuitable debris found and removed from waste that is also capable of generating odours are stored in a covered and sealed skip for off-site recovery or disposal. ***Appendix 2 –Management***, ***2.9 Site Inspection Checklist*** Olfactory monitoring carried out on-site by site manager	Possibility of occurrence is low	Possible annoyance of smells affecting adjacent premises and public using the footpaths for a short duration during working hours	Not significant

Appendix 2 – Management

Appendix 2.5 – Maintenance Checklist

Item requiring maintenance	How often? (tick the appropriate box)						Where are maintenance instructions?	Who is responsible?
	Day	Week	Month	Year	2 years	5 years		
Visually check the site drains and silt traps for debris & blockages. Clean silt traps	✔	✔					Clean and unblock as required.	Site Manager & designated supervisor & operative(s)
Visually check the site to ensure that there are no spills, oil leakages or loose debris / litter.	✔						Clean up & repair as required	Site Manager & designated supervisor & operative(s))
Carry out visual checks to site surfacing, bunded areas and contained or covered areas for integrity and ingress & egress of liquids.	✔						Repair and remedy where necessary.	Site Manager & designated supervisor & operative(s)
Check state of fences, gates and security systems.	✔	✔					Repair and remedy where necessary.	Site Manager & designated supervisor & operative(s)
Check water for oil & levels on underground interceptor.		✔		Check immediately after any spills or leakages			Remove contaminated or oily waters if present / detected	Site Manager & designated supervisor & operative(s)
Check Plant & Mobile machinery for smooth quiet operation.		✔	✔	✔			Service if necessary	Site Manager & designated supervisor & operative(s)
Check all Plant and Equipment for leaking fluids.		✔	✔	✔			Clean up & Service if necessary	Site Manager & designated supervisor & operative(s)
Check Fuel Storage Tank for levels and leaks		✔	✔	✔			Clean up, empty and repair if necessary	Site Manager & designated supervisor & operative(s)

Appendix 2 – Management

Appendix 2.6 – Maintenance Record

Item:	Due:	Completed on	Completed by	Comments

Appendix 2 – Management

Appendix 2.7 – Complaints Record

Complaints Record			
Name of Complainant:			
Address			
Phone No.			
Date of Complaint		**Time of Complaint**	
What happened, what was it about?			
Was anyone else aware of this – other neighbours or your staff? If so who?			
Did the complaint relate to your site? If so, what happened? What went wrong?			
What have you done to make sure that it does not happen again?			
Was there any significant pollution or environmental damage to land, water or protected areas? (tick one) (examples may include: dust, odour or noise pollution outside the site or spillage of polluting liquids onto the ground, or into a drain or a watercourse)			
Yes	**No**	**If Yes, complete an *Incident form in Appendix 2.8***	
If Yes, take steps to prevent further damage and notify Natural Resources Wales on 0300 065 3000 and any other relevant regulators ASAP, have you done so? (tick one)			
Yes	**No**	**You must also write or send an email to confirm this to the local office refer to the *Accident Management Plan***	
Who did you phone and at what time did you phone?			
Describe any other actions taken or instructions given including names dates and times			
Name:	***Signed:***	***Position:***	***Date: / /***

Continue on a separate sheet if you do not have enough room and keep the completed form in the file to discuss with Natural Resources Wales when they visit.

Appendix 2 – Management

Appendix 2.8 – Incidents, Accidents and Non-Conformances

Incidents and Accidents			
Date of Incident		**Time of Incident**	
What happened, what was it about?			
Was a permit condition breached? if so which permit(s) and condition no.(s)			
Was anyone else aware of this – other witnesses? If so who?			
What have you done to make sure that it does not happen again?			
Was there any significant pollution or environmental damage to land, water or protected areas? (tick one) (examples may include: dust, odour or noise pollution outside the site or spillage of polluting liquids onto the ground, or into a drain or a watercourse)			
Yes	**No**	**If Yes, take steps to prevent further damage and notify Natural Resources Wales 0300 065 3000 / https://naturalresources.wales/about-us/contact-us/report-an-incident/?lang=en and any other relevant regulators ASAP**	
Have you done so? (tick one)			
Yes	**No**	**You must also write or send an email to confirm this to the local office & refer to the *Accident Management Plan***	
Who did you phone and at what time did you phone?			
Describe any other actions taken or instructions given including names dates and times			
Name:	***Signed:***	***Position:***	***Date: / /***

Continue on a separate sheet if you do not have enough room and keep the completed form in the file to discuss with Natural Resources Wales when they visit.

Appendix 2 – Management

2.9 – Site Inspection Checklist

Check: Type: Daily ☐ Weekly ☐ Monthly ☐ Yearly ☐

Checks: (**Score 1 to 3**) **1** = Satisfactory **2** = Poor / Action Recommended **3** = Urgent Actions

Site Inspection Checklist								
Day of inspection	**Mon**	**Tues**	**Wed**	**Thur**	**Fri**	**Sat**	**Score**	**Action By.**
Weather Conditions								
Site Personnel/Manning								
CCTV/Security/Fences/Gates								
Surfaces & Site Roads								
Waste Storage Areas								
Waste Types								
Aggregates & Testing								
Waste Quarantine								
Waste Segregation & Capacities								
Equipment, Machinery & Maintenance								
Infrastructure, Repair, Maintenance & Signage								
Fuel Storage Tank								
Spillages and Leakages								
Loose debris and litter								
Dust								
Noise								
Odour								
Mud & Debris on Road(s)								
Vermin/Pests/Birds								
Tidiness / Housekeeping								
Comments/Actions taken:								

Inspected by:

Name: …….. Position: ……..… Date: ……..…..

Appendix 2 – Management

2.10 – Waste Characterisation and Acceptance Form

Pre-acceptance of Waste at Wern Tarw Recycling Ltd	
Waste Producer ☐ and / or Holder ☐ Details (tick one) ✓	
Name:	**Address:**
Tel No.:	
Fax No.:	
E-mail address:	**Postcode:**

INFORMATION REQUIREMENTS FOR WASTE ACCEPTANCE PROCEDURES		
Information Required		**Description & Comments**
1	***Source and origin*** of the waste: ✓ Industrial Land ☐ Commercial Land ☐ Residential Land ☐ Gardens & Parks ☐ Agricultural Land ☐ Other (specify):	
2	Description of the ***process producing the waste***	
	Characteristics of the production process raw materials and products	
	SIC Code (2007):	
3	The six digit ***LoW/EWC waste code***	
4	The ***composition*** (e.g. % w/w) of the waste	
5	The ***description and appearance of the waste***	
	Physical form	
	Colour	
	Smell	
	Consistency	
6	Can the waste be ***re-used*** in its existing state?	
7	The ***treatment to be*** applied to the waste	
8	Does the waste contain ***substances or debris*** which render the waste ***as contaminated?***	
9	***Hazardous*** properties or items in the waste?	
10	Does the waste meet the following ***threshold criteria for end use?:*** ✓ (refer to **Section 2.2** of **EMS**) **T1** = Residential with Gardens and with access to allotments: **Yes** ☐ **No** ☐ **T2** = Residential with no private gardens, Public open spaces: **Yes** ☐ **No** ☐ **T3** = Commercial/Industrial: **Yes** ☐ **No** ☐	
11	***Key variables*** i.e. variability of ***composition***, components or substances	
12	What are the prescribed ***process routes and storage areas*** to be used in the re-use or recycling of this waste?	Area(s):

SUPPORTING OR ADDITIONAL INFORMATION / COMMENTS

Declaration: *The waste has been characterised in accordance with the Permit and Waste Pre-Acceptance Procedures at Wern Tarw Recycling Ltd.*

Name: …….. **Signed:** ……..... **Position:** …….. **Date:** ……/……/……

Appendix 2.11 - Analysis Request Form

Sample Producer ☐ / Provider ☐ Details (tick one) ✓	
Company Name & Address: Wern Tarw Recycling Ltd 43 Village Farm Industrial Estate Pyle Bridgend Mid Glamorgan CF33 6NU	**Contact Details:** **Telephone No.: 01656 74375** **E-Mail:** admin@shillibiers.co.uk **Contact Person: Leyton Shillibier / Nick Gillam**

Sample Details	
Sample Description:	
Sample Origin	**Sampling Location(s):**
Sample ID	**Sample Size (Kg/Volume)**
Special Precautions / Hazards: When using do not eat or drink. Do not empty into drains; dispose of this material and its container in a safe way.	**Date of Sample Taken: .....** **Date of Sample Provided: .....** **Sampler/ Provider: .....**

Analysis Required & Parameters to be Analysed ☑

Metals ☐ (Total ☐/ Soluble ☐)**:**	**Organics** ☐ (Total ☐/ Soluble ☐)**:**	**Other:** ☐
Arsenic	PAH	pH
Cadmium	Phenols	Dry Weight / Moisture content %w/w
Chromium	DRO C8 - C35	
Lead		
Mercury	**Inorganics** (Total mg/kg)**:**	
Nickel	Cyanide (Free)	
Selenium	Sulphate	
Copper	Sulphur (Free)	
Zinc	Sulphide	
Boron		

Additional Information / Comments

Please keep a copy of this form with the sample(s) and retain a copy for your records

EMS - Appendix 3

Accident Management Plan

Wern Tarw Recycling Ltd Trading as Shillibiers
43 Village Farm Industrial Estate
Pyle
Mid Glamorgan
CF33 6NU
Environmental Permit Number:
EPR/FB3937RH

Tel: 01656 743755

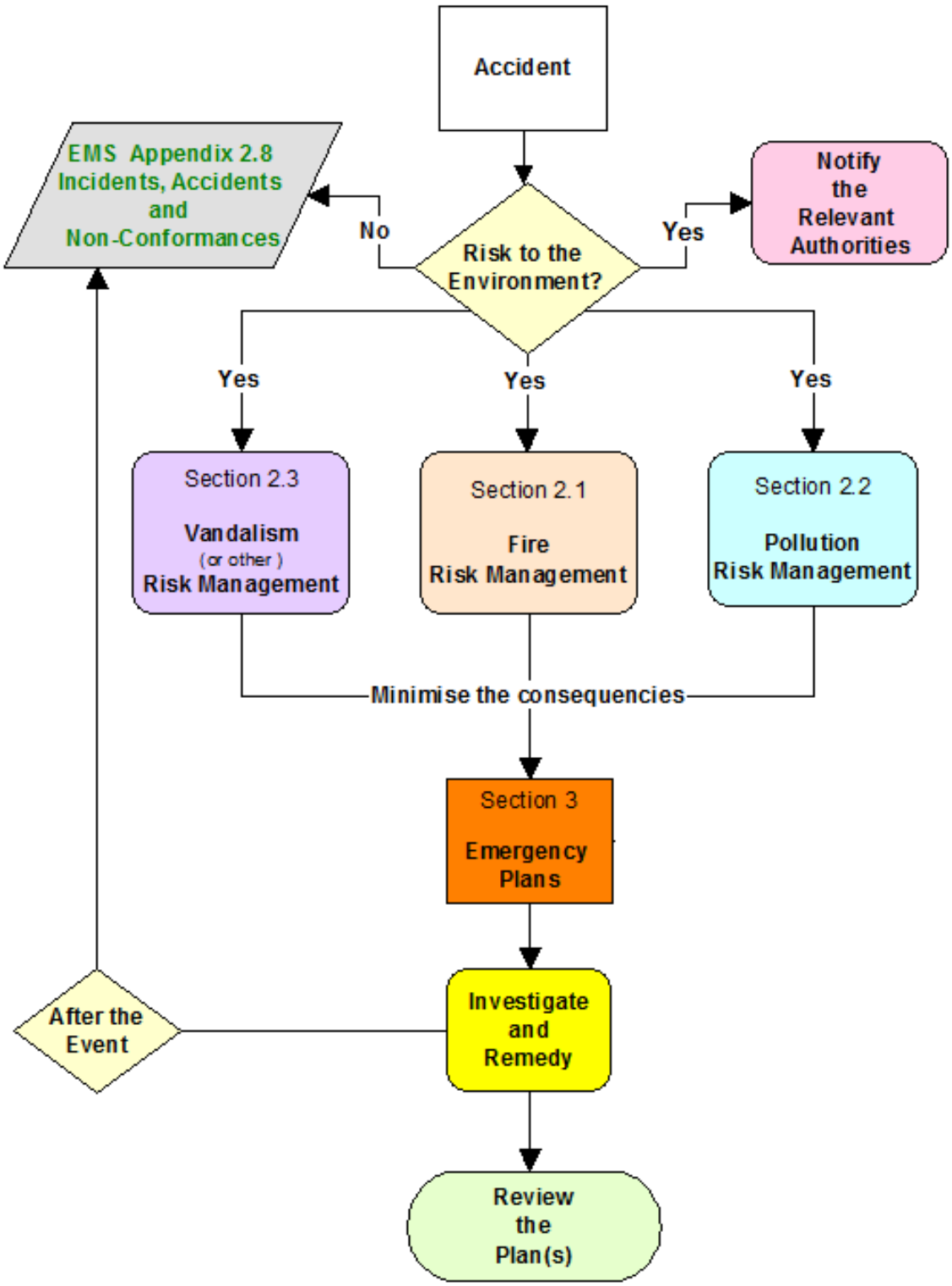
E-mail: admin@shillibiers.co.uk
Web: http://shillibiers.co.uk/

Document Prepared by	January 2019 Revision: 0
Joe Gatley Caldey View Clos Sant Cenydd Llangennith Swansea SA3 1JT **Tel:** 01792 386699 **E-mail:** joe.gatley@gmail.com	**This manual is approved for use by:** **Wern Tarw Recycling Ltd**
	Name: Leyton Shillibier
	Position: Company Director
	Signed:
	Date:

Section 1

What to do if an Accident Happens

If an accident happens which poses a risk of damage to the environment, the procedures and actions provided in this management plan should be carried out. There are other operating procedures and reporting forms within the sites' ***Environmental Management System (EMS)*** and ***relevant Health and Safety Files*** which should also be followed.



Section 2 - Types of Accidents

2.1 Fire

Table 2.1 Fire Risk Management

Event/Failure	Probability and Consequences	Severity and Pathway	Actions to Prevent or Minimise
 **Spark or ignition** from machinery, welding cutting, site staff & persons on-site.	**Low probability**, no combustible wastes are accepted or treated at the site. Cutting and welding is carried out off-site within the maintenance building. Danger & damage to people, site offices, plant & infrastructure and adjacent industrial premises. The public using nearby footpaths and roads Damage to fuel tank causing leaks & spread of fire. Air pollution (smoke and fumes). Injury or death.	Severity is moderate and potentially high. Spreading by contact and by wind/air. Contact with combustible and flammable (e.g. liquid fuels) substances. • Fuel tank • Flammable gas bottles • Combustible quarantined waste and unsuitable debris • Buildings, plant and equipment.	***Site spray damping*** systems employed. Use of ***on-site water tanks*** and pumps. ***Fire extinguishers*** stationed ready for immediate for use in the following locations: • Operational Plant • Maintenance Building • Open yard area by the Building No fires on site, no on-site smoking policy & designated safe off-site smoking area(s). Storage of ***unsuitable (combustible) debris*** is stored on-site in a metal container in the quarantine area and kept to a minimum quantity & duration prior to removal. Flammable ***gas bottles and substances stored within maintenance building.*** ***Contain (dam) fire water & leaking fuels*** with inert sand and soils & arrange for a local contractor (e.g. Tradebe 01633 270 999) to remove contaminated materials asap as hazardous waste.

2.2 Polluting substances

Table 2.2 Pollution Risk Management			
Event/Failure	**Probability and Consequences**	**Severity and Pathway**	**Actions to Prevent or Minimise**
 **Fuel from Tank** adjacent to the Maintenance Building leaking, spillages or failure from: • Overfilling • Spillages from refuelling plant. • Collision from moving plant and vehicles using the site. • Deterioration and failure of tank • Damage to fuel tank, e.g. from adverse weather conditions	Low to moderate probability. Pollution to sewer Contamination of surfaces, aggregates and wastes. Pollution to land & groundwater.	Severity is low. Site surfaces ↓ Contain / Dam ↓ Removal ***Contain (or dam) leaking fuels*** with inert sand and soils & arrange for a local contractor (e.g. Tradebe 01633 270 999) to remove contaminated materials asap as hazardous waste.	Placing ***signs and barriers/obstacles at fuel tanks to prevent collision*** from moving plant and vehicles. ***Supervision of fuel tank*** capacity not to be exceeded ***during refilling***, sight level gauge to be checked before, during and after refilling. Designated ***vehicle/traffic routes*** to be maintained on-site. ***Flammable liquids***, e.g. solvents & degreasers, are kept ***within locked fire proof containers in stores within in the maintenance building***. ***Spill Kits, Spill Stations & other Absorbents*** (e.g. sand) kept readily available adjacent to fuel tank, on-site and within maintenance building to clean up spillages. ***Used contaminated absorbents or sand*** to be kept within ***sealed containers*** in bunded area and on impermeable surface and kept located within the ***Maintenance Building*** or (for larger quantities) within a ***sealed covered and locked skip*** within the quarantine area prior to off-site disposal as hazardous waste.

2.3 Vandalism

Table 2.3 Vandalism Risk Management			
Event/Failure	**Probability and Consequences**	**Severity and Pathway**	**Actions to Prevent or Minimise**
 **Vandalism** Unauthorised entry to the site leading to: • Wilful damage to fuel tank, plant, equipment, infrastructure and containers. • Arson	Low probability. Consequences could be any of those already specified for Fire and Highly Polluting Substances.	Severity is potentially high. Pathway could be any of those already specified for Fire and Highly Polluting Substances.	***Site supervision and signage*** in place to prevent unauthorised persons. Daily checks and site inspections carried out by staff. ***Buildings and site access gates*** are kept ***locked*** outside working hours. ***CCTV*** in operation. ***Out of hours security checks*** *carried by managers and authorised staff.*

Section 3 – Accident Control & Information

3.1 Accident Control – Key Information

The table below provides key information for dealing with accidents that may pose a risk of environmental pollution.

Table 3.1 Accident Key Information

Site inventory Item	Comments	Location
Fuel Tank	Gas Oil (Red Diesel) stored in 1,200lt portable bunded bowser & pump	Adjacent to Maintenance Building
Gas Cylinders	≈20kg BOC Cylinders: Oxygen x1 Acetylene x 1 Argon mix x 2	Stored within Maintenance Building. Empty cylinders stored in cage adjacent to Maintenance Building
Solvents	Paints and Aerosols Degreasers Cleaners Penetrating fluids (<200 lt max total volume)	Stored in locked ventilated cabinet, within the store room, within the Maintenance Building
Oils	Engine & Lubricating Oils Hydraulic Oils (< 500 lt max total volume)	Stored within Maintenance Building, adjacent to ***Spill Kit Station***.
Other fluids	Antifreeze Screen-Wash (< 200lt max total volume)	
Wastes	Unsuitable debris 12cu/yd skip Quarantined Wastes 20^3-yard ro/ro container	Within designated quarantine bay at the north eastern section of the permitted site boundary

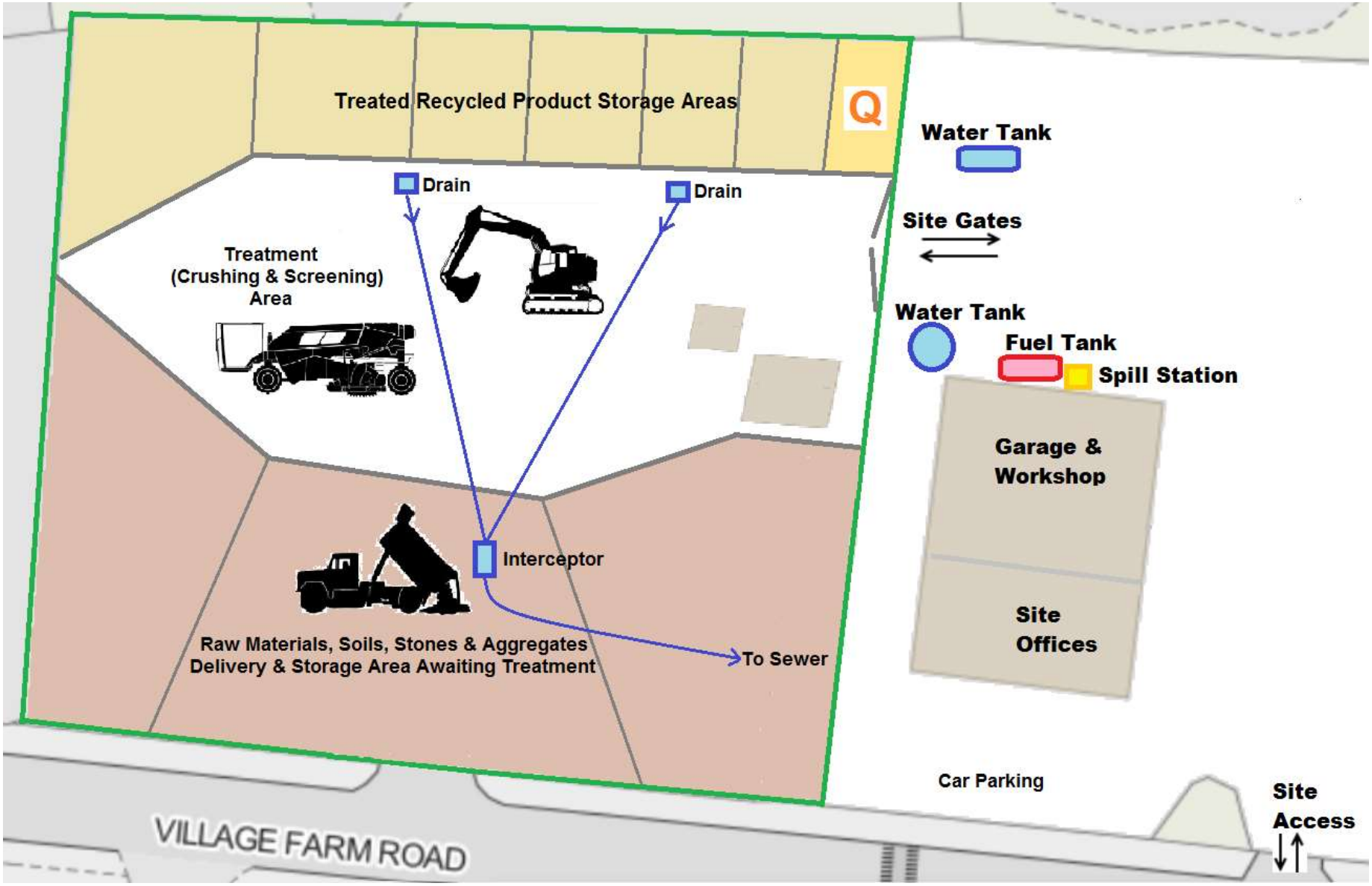
Key equipment Item	Comments	Location & Ref
Fire Extinguishers	CO_2 x 4 Water x 2 Powder x 1 Foam x 1	Located near Fire Exits at in Site Offices and within Maintenance Building. Each item of plant and vehicle is also fitted with CO_2 extinguishers
Mains Water Stop Tap	24hr access to Main Site Office spaces.	Under the sink next to reception
Fire hydrant	Village Farm Road	Approximately 60 meters East from site entrance [H]
Main electrical supply isolator	Fuse-board & lights linked to emergency lights.	Within Maintenance Building

Absorbents / Sand	Spill-kit stations located strategically	Within Maintenance Building and adjacent to the Fuel Tank
On-site water tank and water supply	20,000lt tank fitted with mobile vacuum pump	Adjacent to approach to Site gates and access to Permitted operational area and vehicle wash facility

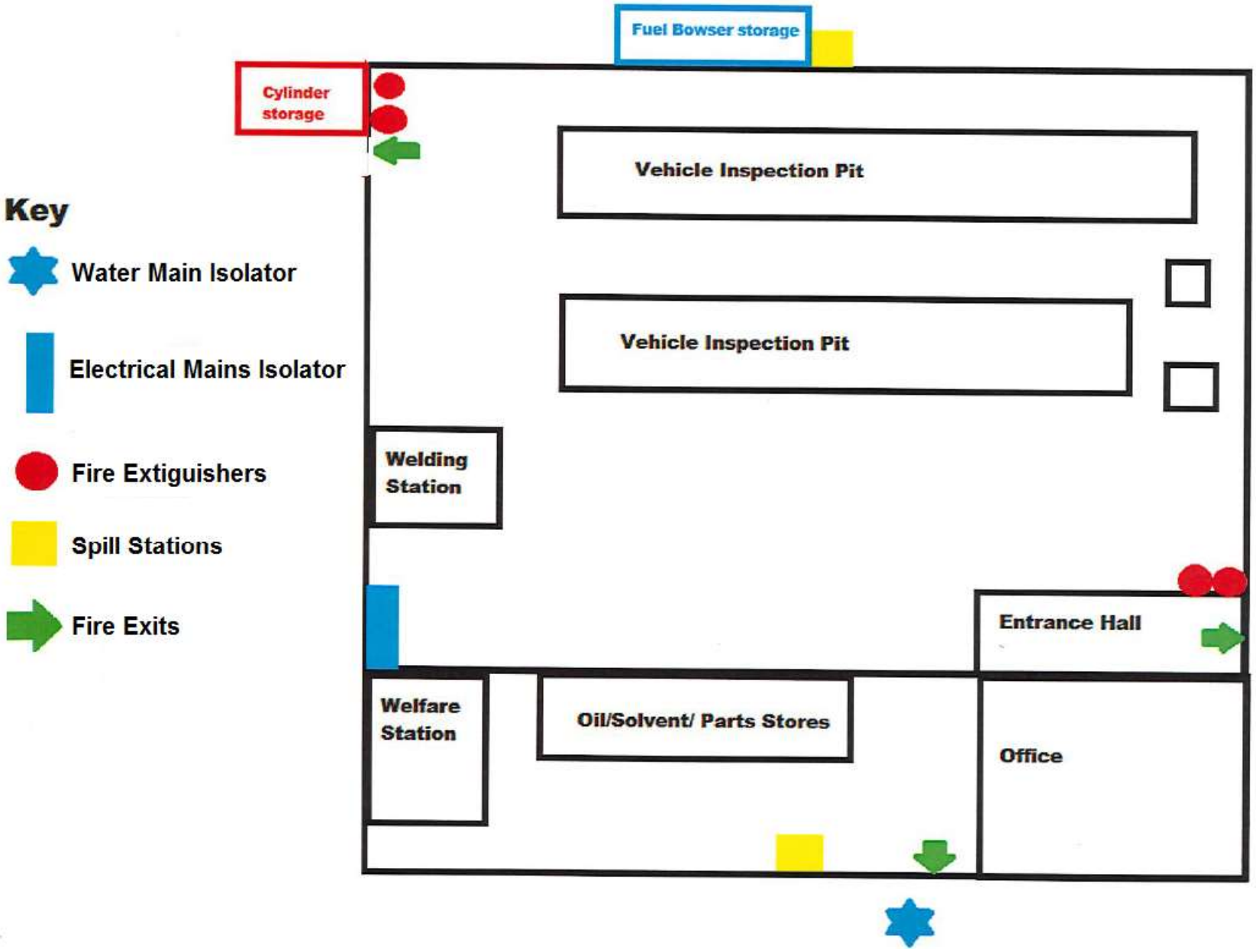
Vulnerable locations **Item**	**Comments/Receptors**	**Location & Ref**
Fuel Tank	Spillages Collisions with plant and vehicles	**EMS** Appendix 1 Site Plans **Section 3.1 & 3.2** (Site Plans below)
Maintenance Building	Likely ignition sources are unauthorised fires / smoking, cutting and welding (maintenance).	
Site Offices	Staff affected by accidents on-site	
Adjacent Industrial Premises	Staff, contractors and visitors	
Adjacent footpath and road	Public	

Emergency procedures **Item**	**Comments**	**& Ref**
Immediate actions	Deal with the emergency safely. Refer to & Action ***Emergency and Health & Safety Procedures***	*See **Section 4, Emergency Plan** of this document below.* • ***4.1 - Contingencies for dealing with fire water*** • ***4.2 - Fire*** • ***4.3 - Major Leaks and Spillages***
Secondary actions	Remedy & Review See ***Section 1*** What to do if an Accident Happens of this document	**EMS** Process Description, Management & Controls & Appendix 2 - Management
Fire & Spillages	Work instructions and Health and Safety Training (Fire Drills etc.) procedures to be further developed depending on type of accidents and balance of risks to Employers & the Environment	Health and Safety File Training & Procedures Tool Kit Talks & Sessions

3.2 Site Layout Plan



3.3 Building Layout Plan

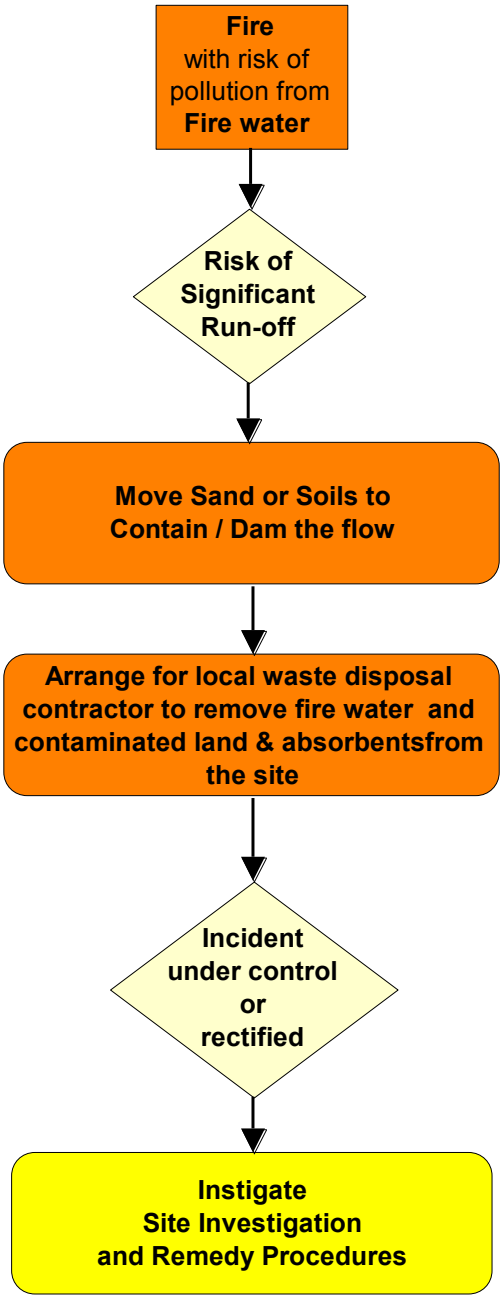


Section 4 – Emergency Plan

4.1 Contingencies for Dealing with Fire Water

Where safe to do so, **Figure 4.1** below shows the actions to follow to manage the risk of fire water run-off in order to contain it and prevent pollution to controlled waters (River Ewenny) downstream of the site.

Figure 4.1



Fire and incident training will be required for site employees in order to ensure their (and other people occupying or using the Site / Yard) safety during potentially dangerous incidents and emergencies.

Further reference should be made to the ***Site Health and Safety File, Procedures and Training.***

4.2 Fire

Emergency Plan

Emergency/Accident/Incident Type:

FIRE

Principle Environmental Impact:

- **Air pollution caused by smoke**
- **Damage to properties and site infrastructure**
- **Pollution of water from contaminated firewater**

Principle Health & Safety Hazard/Risk:

- **Injury or death from heat or contact with flames**
- **Inhalation of harmful smoke or fumes**
- **Injury or death from collapsing property of infrastructure**
- **Explosion from flammable atmospheres or sealed or flammable containers**

Appropriate Personnel	Name	Contact	
		On-site/Offices	Off-site/Mobile
Site Manager & TCM	Leyton Shillibier	01656 743755	07973 800371
Health & Safety Manager	Malcolm Corbett	01656 743755	07854 720075
Site Supervisor/Manager	Nick Gillam	01656 743755	07989 680050
Technical Administrators		01656 743755	
Environmental Adviser	Joe Gatley	01792 386699	07900 698331
Environment Agency	Emergency Hotline	0300 065 3000	
Emergency Services	Fire, Police, Ambulance etc.	999	999
HSE	Incident Contact Centre	0345 300 9923	

4.3 Major Spillages & Leaks

Emergency Plan

Emergency/Accident/Incident Type:

Major Spillages & Leakages

Principle Environmental Impact:

- **Pollution to drains and waters outside the site**
- **Pollution to land**
- **Pollution to groundwater**
- **Damage to vegetation and ecosystems**

Principle Health & Safety Hazard/Risk:

- **Harmful or toxic in contact with the skin**
- **Harmful or toxic by inhalation**
- **Harmful or toxic by ingestion**
- **Prolonged exposures may cause long term adverse effects**

Action in case of a spillage or leakage

1	Contain and absorb the substance if safe to do so
2	Prevent substances from entering drains or waters, cover, seal off or shut of pipes
3	Identify the substance and its hazardous properties
4	For large spills and leaks use specialist contractors (e.g. Natural Solutions 01656 741799) to assist and remediate
5	Follow safety advice provided on or with the contents, or obtain material safety data sheets from supplier
6	Wear suitable PPE
7	Remove and or clean the affected areas
8	Place contaminated absorbents, affected soils, wastes, items etc. into a sealed container
9	Arrange for suitable disposal of contaminated debris (waste may need to be consigned as hazardous waste)

EMS – Appendix 4

Factory Production Control System

For

Aggregates

Wern Tarw Recycling Ltd Trading as Shillibiers
43 Village Farm Industrial Estate
Pyle
Mid Glamorgan
CF33 6NU

Environmental Permit / Waste Management Licence Numbers:

- Village Farm Ind Est, Pyle Site; EB3430RT / EAWML 100022
- Ex MOD RAF Site, Tythegston Site; FP3995EL / EAWML 100048

Tel: 01656 743755 / 745292
Fax: 01656 745679

E-mail: enquiries@shillibiers.co.uk

Web: http://shillibiers.co.uk/

Document Prepared by	January 2019 Revision 0.1
Joe Gatley Caldey View Clos Sant Cenydd Llangennith Swansea SA3 1JT **Tel:** 01792 386699 **E-mail:** joe.gatley@gmail.com	**This manual is approved for use by:** **Wern Tarw Recycling Ltd**
	Name: Leyton Shillibier
	Position: Company Director
	Signed:
	Date:
	Doc Reference: FPC/JG-REV0

Contents

1 Introduction

1.1 Introduction & Site Details

1.1.1 Introduction

Wern Tarw Recycling Ltd carry out aggregate manufacturing operations at two of their dedicated Recycling Facilities in the County of Bridgend, South Wales which are located at Village Farm Industrial Estate, Pyle and Ex MOD RAF Site, Tythegston.

The operations are carried out under the controls of an ***Environmental Permit*** for each of the site's:

- ***Village Farm Ind Est, Pyle Site***; EB3430RT / EAWML 100022
- ***Ex MOD RAF Site, Tythegston Site***; FP3995EL / EAWML 100048

Aggregates are manufactured under the ***Appendix 4 - WRAP Protocol for Recycled Aggregates*** for use -off-site, this protocol requires that a system of controls that need to be in place to demonstrate that the manufactured aggregates have been fully recovered and meet the ***"end of waste"*** criteria set out in the this protocol.

This document aims to provide the controls, methods, procedures and recording systems for the production of aggregates in accordance with the protocol, which may be subject to periodic scrutiny and ***audits carried out by WRAP and or the Environment Agency.***

Figure 1.1a - Location of Village Farm Ind Est, Pyle Site O

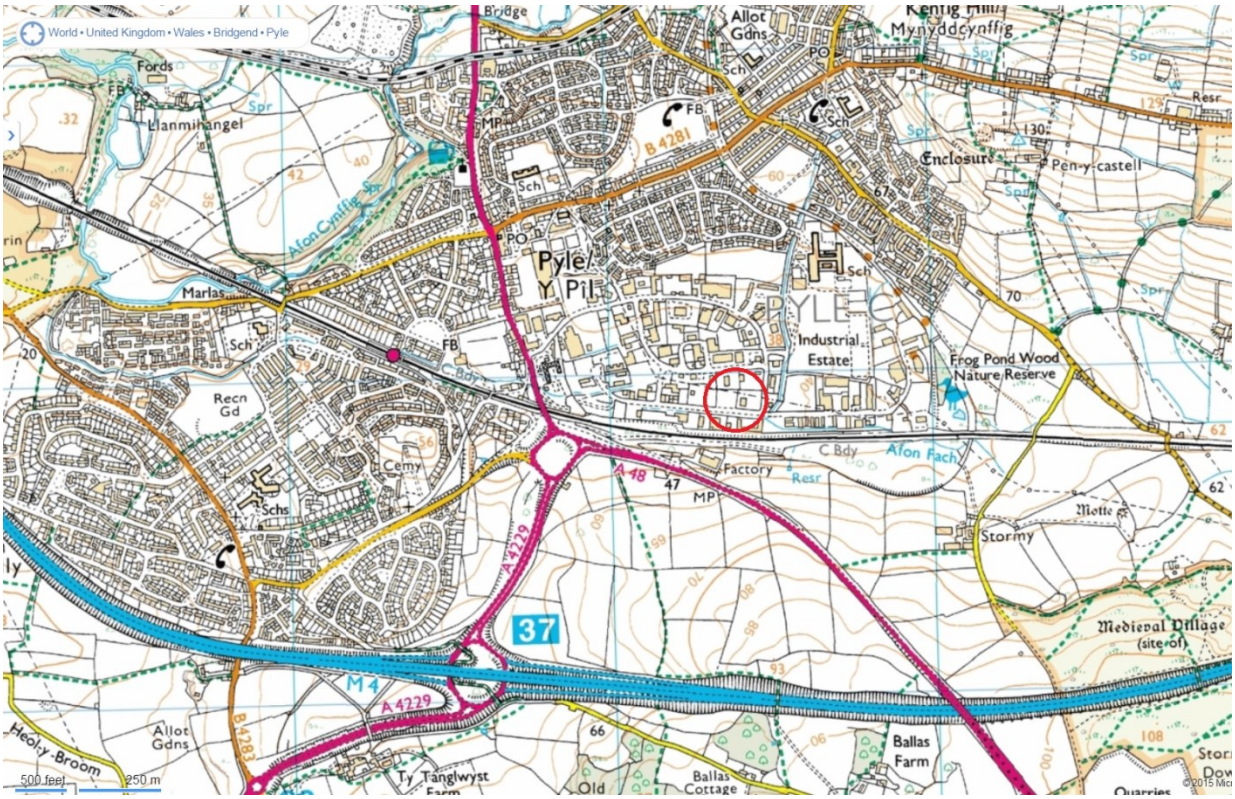


Figure 1.1b - Site Boundary of Village Farm Ind Est, Pyle Site ☐

Figure 1.2a - Location of Ex MOD RAF Site, Tythegston O

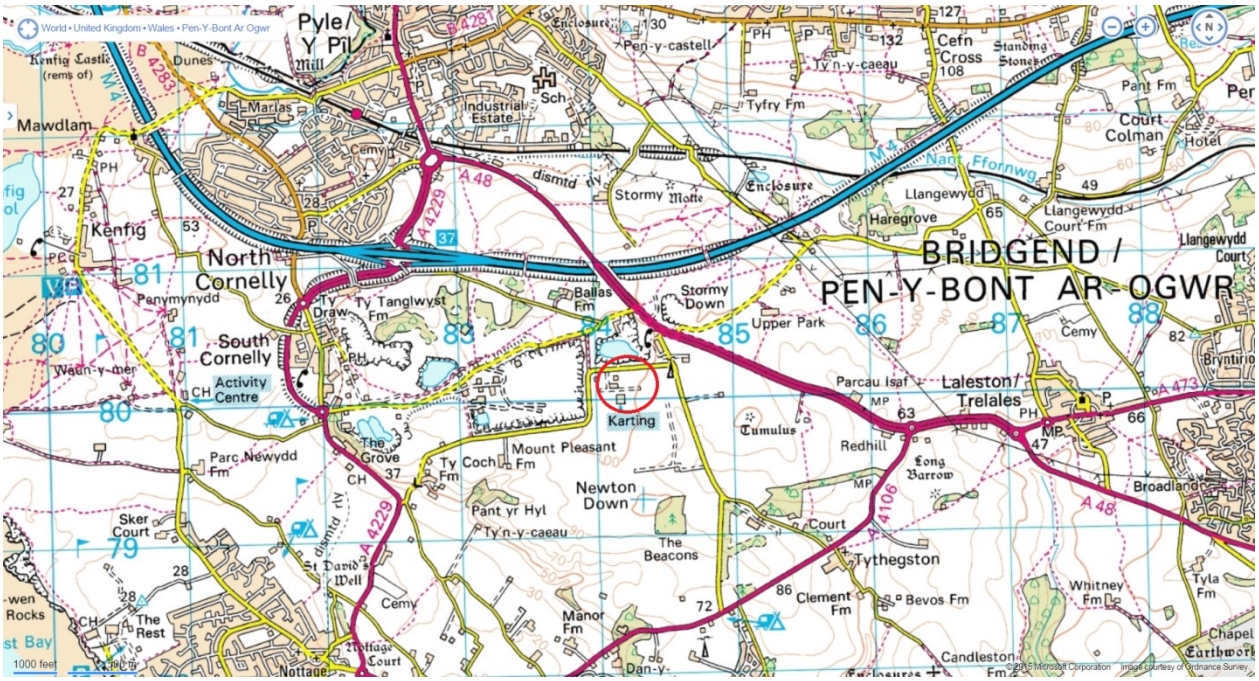
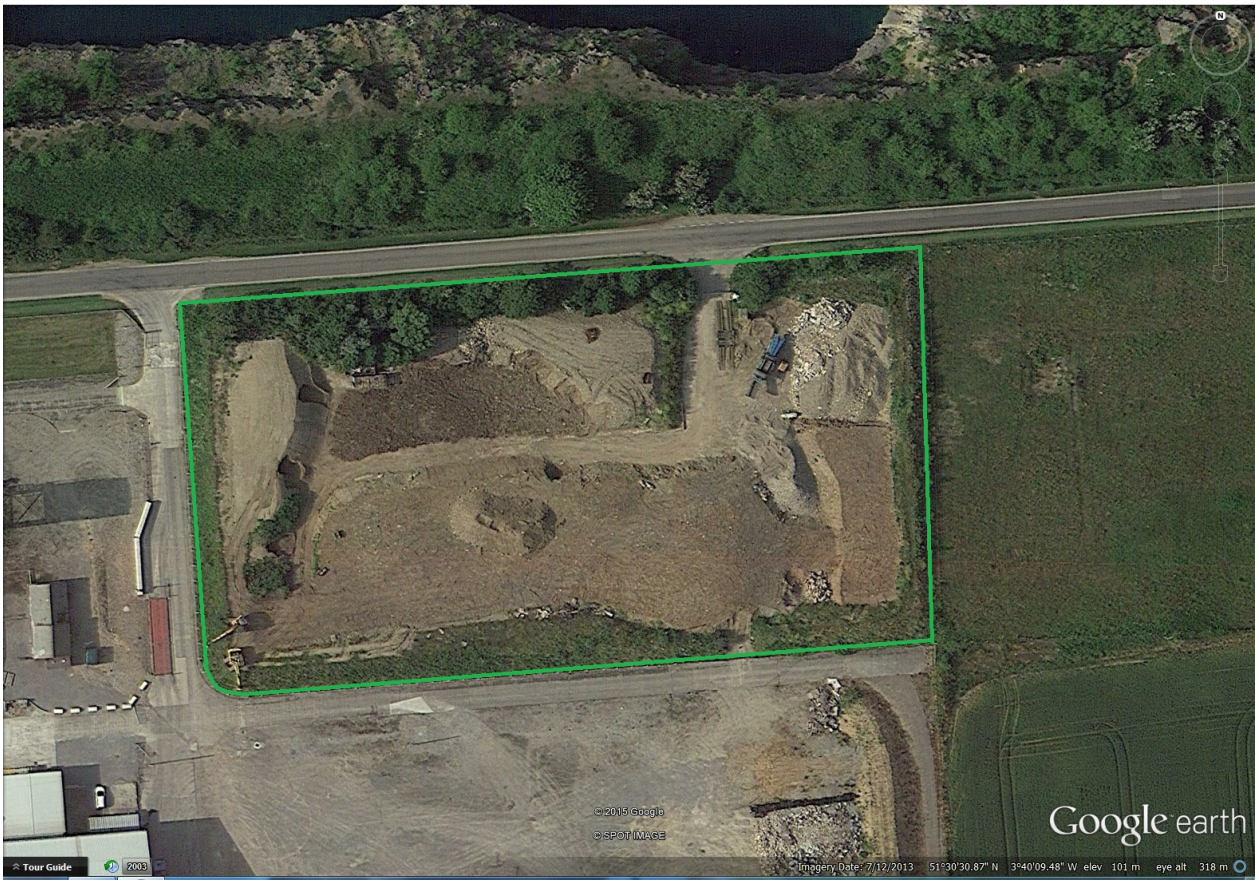


Figure 1.2b - Site Boundary of Ex MOD RAF Site, Tythegston



Construction and demolition wastes are delivered to the Recycling Site's typically in Bulk Tippers provided and transported by Wern Tarw Recycling Ltd, wastes are typically sourced from large scale demolition and construction projects. Pre-acceptance procedures ensure wastes are assessed and recycling is pre-determined before arrangements are made to deliver the wastes to the site's for aggregate manufacture.

Aggregates produced at the site's are supplied on-demand to local customers for use as ***well graded granular fill and sub-base***, typically for the use in construction of or maintenance of hard-standings, roads and tracks etc. ***Further details*** of the wastes accepted, manufacturing process, controls, recording and product dispatch is provided in ***Section 2*** of this document.

1.2 Document Status

1.2.1 The information provided in this document aims to provide a ***Quality Management Control System*** for the Production of Aggregates, which describes the processes and operations and how they are documented and controlled to meet the **WRAP Quality Protocol**.

1.2.2 This document (and any other referenced or associated documents to it) provides information to the ***Operator / Manufacturer and to the Natural Resources Wales*** for the operation and regulation of the activities carried out at the site.

1.2.3 ***This document*** (in any form e.g. electronic or hard copy) ***should remain with the Operator / Manufacturer at all times*** during the active & operational status of the site.

1.2.4 ***The responsibility*** for ensuring that ***this document is implemented and maintained lies*** with the ***designated technically competent manager*** and / or ***document approver.***

Any proposed changes to the site, its' activities or management should be reviewed alongside the latest approved protocol(s)and environmental permit beforehand.

This document and the effectiveness of the operations must be ***subject to periodic review*** by the designated technically competent manager and / or document approver***, a record of these reviews shall be made and made available on request by an authorised officer or relevant representative.***

1.2.4 This document from time to time ***may be updated*** to reflect best practices, changes to operations and regulations etc. therefore***, current/updated copies of "this" document are made available by directly contacting the author, requests for copies of this Factory Production Control System should be made to:***

Joe Gatley
Caldey View
Clos Sant Cenydd
Llangennith
Swansea
SA3 1JT

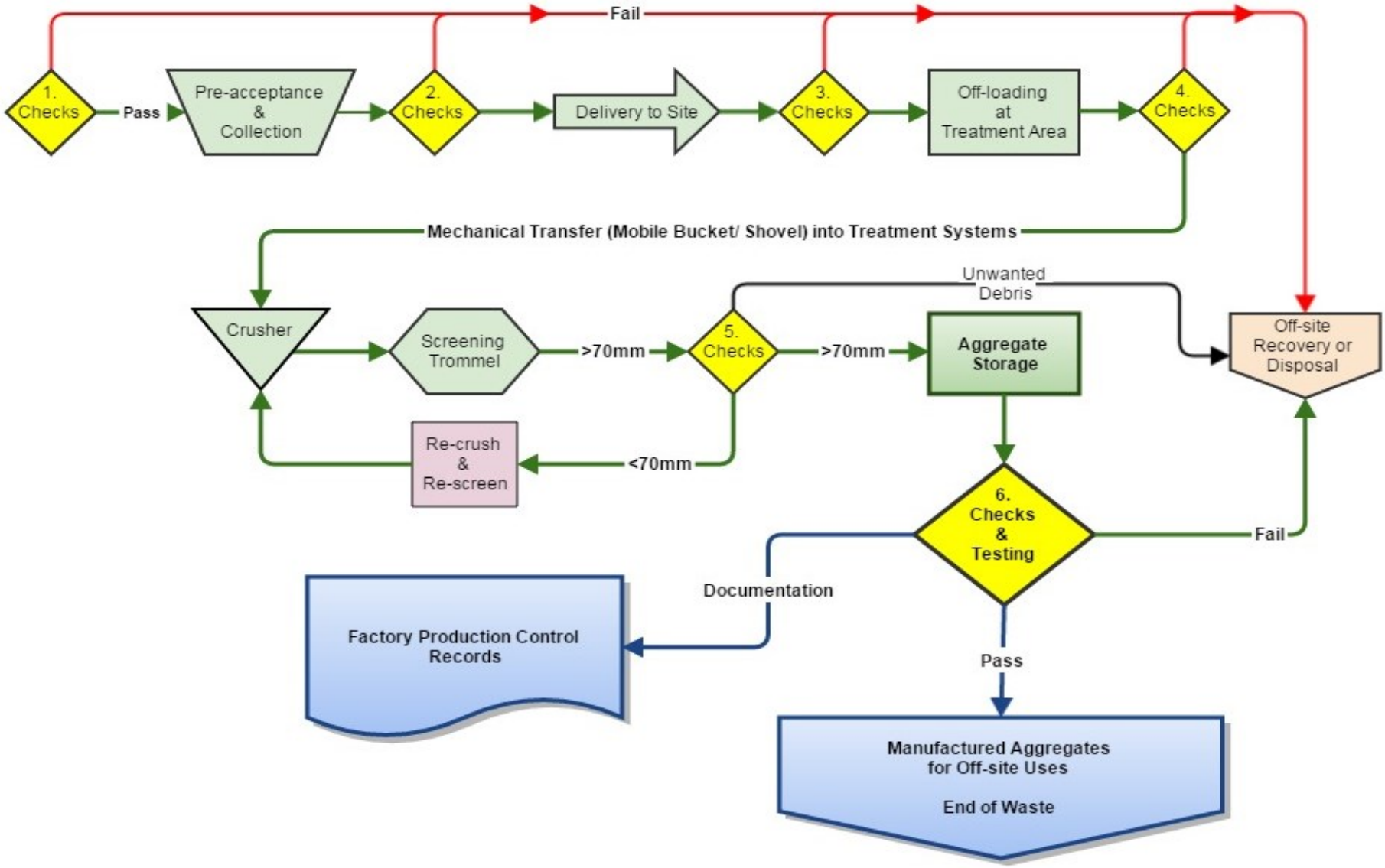
E-mail: joe.gatley@gmail.com

Tel: 01792 386699 / 07900 698331

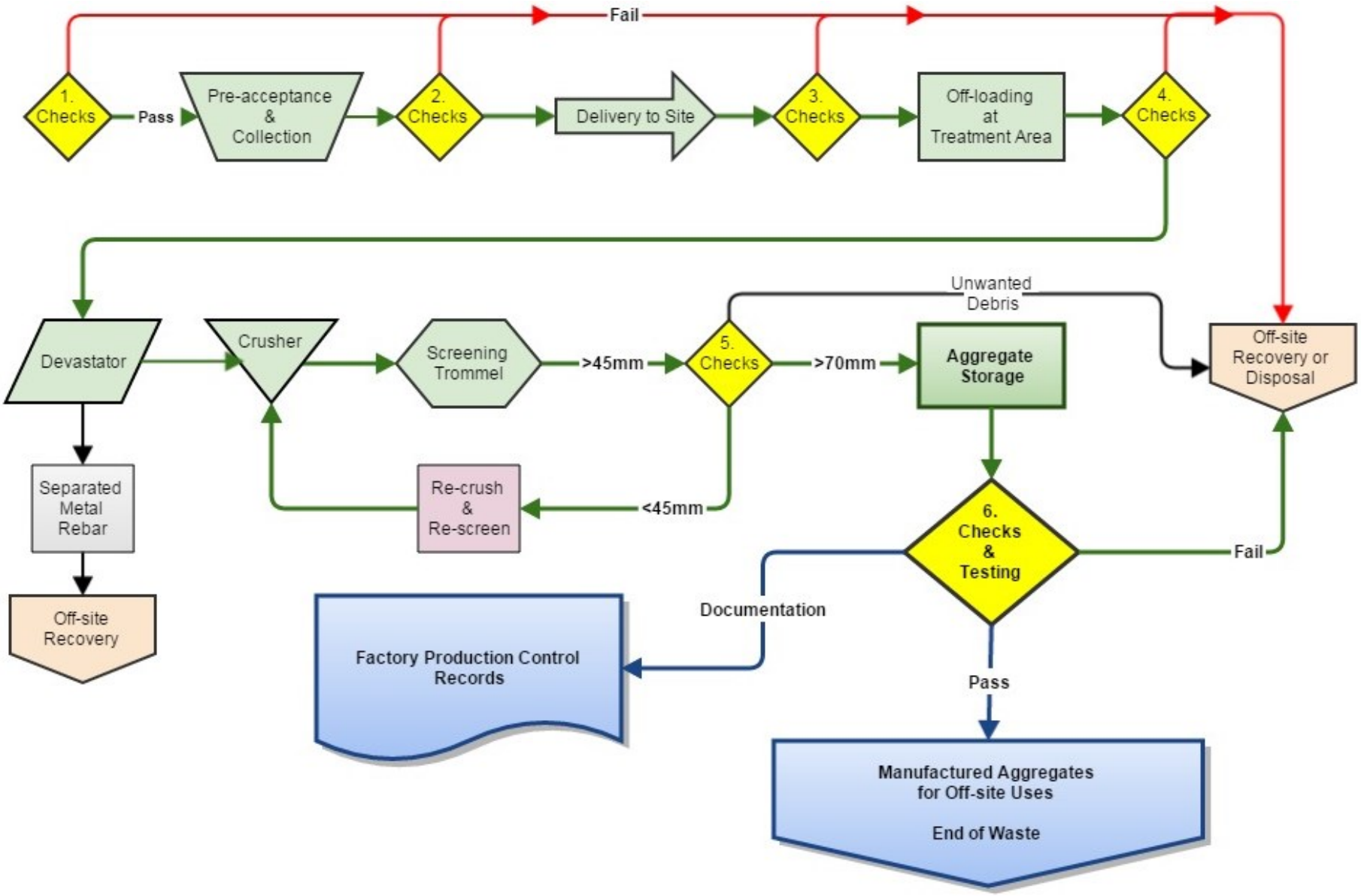
2 Factory Production Control System

2.1 Overview of Operations

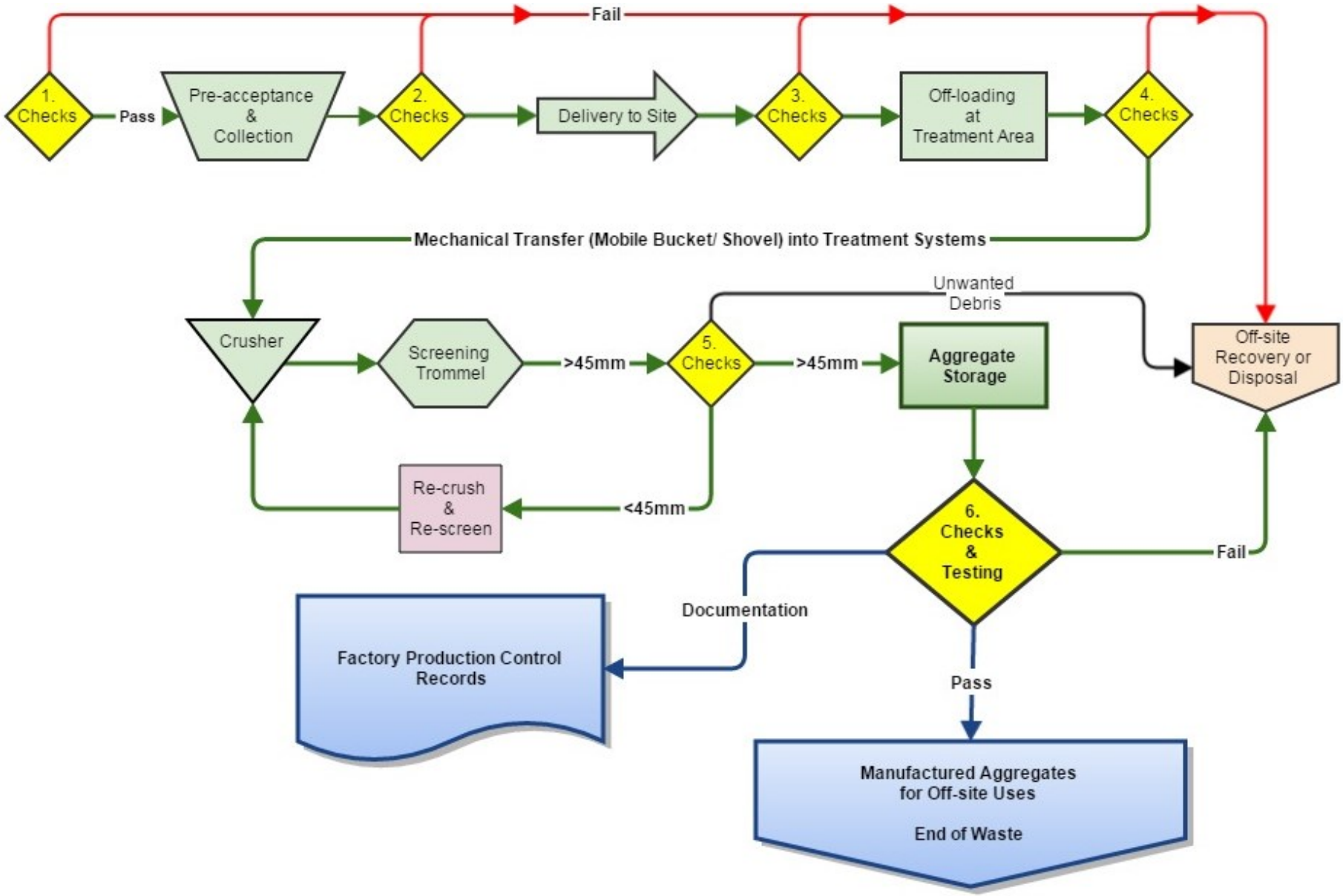
2.1.1 Production Process 1 - Mixed Hardcore (6F2)



2.1.2 Production Process 2 - Recycled Concrete (Type 1)



2.1.3 Production Process 3 - Road Plannings (Type 1)



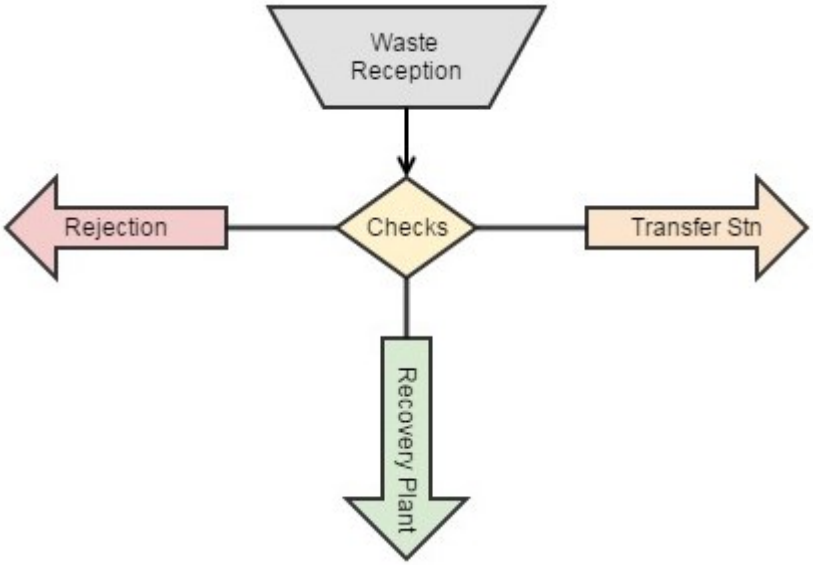
2.2 Waste Acceptance Procedures

2.2.1 Waste Types Permitted

Waste types permitted under the ***environmental permit (SR2008No3)*** include a large range of commercial industrial and household wastes, the majority of these non-inert wastes are not delivered or accepted at the recovery plant and are directed to the adjacent transfer and sorting facility.

Waste collections are inspected for ***site type delivery*** (Aggregate Recovery Plant or Sorting and Transfer Station) by the drivers before removal and delivery to the appropriate site.

Pre-acceptance and acceptance checks at the recovery plant involves segregating (pre-sorting) specific wastes (e.g. plaster board) and removing any unsuitable debris or items for separate off-site recovery or disposal operations before being transferred to the stockpile for recovery through the plant separation systems.



2.2.2 Typical Waste Types Accepted and Restricted to Aggregate Manufacture

In-line with the Quality Protocol, typical waste types accepted for processing through the recovery plant are restricted to the following waste codes and descriptions provided below with the ***main:***
waste types accepted for aggregate manufacture are shown in bold and highlighted boxes

Table 2.2.2 Wastes Accepted for Aggregate Manufacture		
Waste Code	**Waste Description**	**Comments**
Construction and demolition waste – soil (including excavated soil from contaminated sites), stones and dredging spoil		
17 05 04	**Soil and stones other than those mentioned in 17 05 03**	Must not contain any contaminated soil or stone from contaminated sites.

Table continued /...

Table 2.2.2 Wastes Accepted for Aggregate Manufacture		
Waste Code	**Waste Description**	**Comments**
17 05 06	Dredging spoil other than those mentioned in 17 05 05	Allowed only if: Inert aggregate from dredgings. Must not contain contaminated dredgings or contain fines
17 01 01	Track ballast other than those mentioned in 17 05 07	Must not contain any contaminated soil or stone from contaminated sites.

Construction and demolition waste – other construction and demolition wastes		
17 09 04	**Mixed construction and demolition wastes other than those mentioned in 17 09 01*, 17 09 02* and 17 09 03***	Allowed only if: The waste is generated from utilities trenchings. The waste consists of sub base aggregates i.e. granular material. ***The waste contains only materials that would be described by entries 17 01 01, 17 03 02 and 17 05 04 if the waste was not mixed.***

*Footnote
17 01 01 concrete
17 03 02 bituminous mixtures other than those mentioned in 17 03 01*
17 05 04 soil and stones other than those mentioned in 17 05 03*

Construction and demolition waste – concrete, bricks, tiles and ceramics		
17 01 07	**Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06**	
17 01 02	Bricks	
17 01 01	Concrete	Must not include slurry
17 01 03	Tiles and ceramics	

2.2.3 Other Permitted Waste Types Accepted for Aggregate Manufacture

Waste types reproduced below are extracts from ***Appendix C of the Quality Protocol***:

Wastes from physical and chemical processing of non-metalliferous minerals

Type and exclusions	Waste code
Waste gravel and crushed rocks other than those mentioned in 01 04 07 May include excavation from mineral workings.	**01 04 08**
Waste sand and clays Waste sand only. Must not include contaminated sand.	**01 04 09**

Wastes from manufacture of glass and glass products

Type and restrictions	Waste code
Waste glass-based fibrous materials Allowed only if: Wastes without organic binders	**10 11 03**

Packaging (including separately collected municipal packaging waste)

Type and restrictions	Waste code
Glass packaging	**15 01 07**

Construction and demolition waste – wood, glass and plastic

Type and restrictions	Waste code
Glass Must not include fibreglass or glass fibre.	**17 02 02**

Construction and demolition waste – bituminous mixtures, coal tar and tarred products

Type and restrictions	Waste code
Bituminous mixtures other than those mentioned in 17 03 01	**17 03 02**
Allowed only if: Bituminous mixtures from the repair and refurbishment of the asphalt layers of roads and other paved areas (excluding bituminous mixtures containing coal tar and classified as waste code 17 03 01). Must not include coal tar or tarred products. Must not include freshly mixed bituminous mixtures.	

Wastes from the mechanical treatment of waste not otherwise specified (for example sorting, crushing, compacting, pelletising)

Type and restrictions	Waste code
Glass Does not include glass from cathode ray tubes.	**19 12 05**
Minerals (for example sand, stones) Must not contain contaminated concrete, bricks, tiles, sand, stone or gypsum from recovered plasterboard.	**19 12 09**

Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions

Type and restrictions	Waste code
Glass Must not include fibreglass.	**20 01 02**
Garden and park wastes (including cemetery waste) – soil and stones Must not contain contaminated stones from garden and parks waste.	**20 02 02**

2.2.3 Waste Acceptance Records for Aggregate Manufacture

All incoming wastes are accompanied by Duty of Care Waste Transfer Notes, and wastes accepted or rejected are recorded and maintained in accordance with the environmental permit. additionally the following records are made on wastes destined for aggregate manufacture:

- Waste Code and Description
- Visual checks for conformance that the waste meets the specification provided in Sections & Tables 2.2.2 and 2.2.3 above.
- Pass or Fail?
- Source of the waste and any additional information (e.g. analysis, site reports etc.).
- Supplier and Transporter
- Recovery Method / Designation
- Additional controls / Comments
- Waste Rejection

Records are made using the ***Waste Acceptance Form*** provided in ***Appendix 1.1***

2.3 Method Statement

2.3.1 Recovery Process

Following satisfactory ***Waste Acceptance Procedures*** described in ***Section 2.2*** the wastes are stockpiled within the Aggregates Recovery Plant building, approximately 1 tonne of soils and stones or mixed demolition wastes per bucket is transferred by a mechanical bucket into the hopper at the start of the ***Aggregates Recovery Plant*** (ARP). The ARP is a fixed dedicated in-line separation plant within the building which is staffed by a minimum of 4 plant operators which oversee the effectiveness of the operations and quality of the throughput materials, a ***Production Process Flowchart*** showing an **Overview of Operations** is provided in **Section 2.1**.

Soils, grits and stones are separated through 30mm and 20mm ***trommel screens*** which is monitored by a plant operator and are collected in a dedicated soils bay below the trommel.

The coarser materials then enter onto a ***picking belt*** fitted with an ***air blower*** which is also is monitored by a plant operator where any light unwanted debris (e.g. paper and plastics) are separated and are collected in a dedicated bay below the picking belt.

The aggregates are then visually inspected as they travel along the ***picking belt*** and any unwanted heavy or large debris is manually separated and removed to a dedicated bay below the picking belt.

The resulting soils and stones are then fed from the picking belt into another ***screening tromme***l fitted with a 70mm screen that monitored by a plant operator which separates the soils, and stones from the larger aggregate into a dedicated bay below.

The resulting large aggregate is then fed into the ***crusher*** that monitored by a plant operator which reduces any coarser aggregates passing through the system to less than 100mm.

The aggregate finally passes under a ***ferro-magnetic separator*** positioned above the ***conveyor belt*** to remove any metals (e.g. re-bar) which is collected in a dedicated container before the final product is deposited to the ***Aggregate Storage Area*** situated outside the building awaiting checks and testing prior to off-site uses. Where checks identify that further ***re-screening*** is required (e.g. to remove clay binding) then the aggregates are re-fed into the trommels.

2.4 Product Specification & Uses

2.4.1 Aggregate Characterisation

The final product is assessed for suitable use as ***General Granular Fill, Specification for Highway Works, Class 1B*** for supply to local customers for use in typically maintaining or construction of hard-standings, private roads and tracks.

2.5 Product Testing & Controls

2.5.1 Testing Frequency

The maximum estimated production of aggregates from the Aggregate Recovery Plant is 5 tonne per hour operating at 40 hours per day for a maximum of 5 days per week (allowing for shut down and maintenance) which equates to a maximum of ***200 tonnes per production week***.

Testing and frequency of the aggregates proposed are in-line with the ***specified default frequencies provided*** in the **WRAP Quality Protocol** which is reproduced below:

End use	Standard and Specifications	Test	BS test reference	Minimum test frequency (see B2.8)
All end uses	BS EN 13242 BS EN 12620	Particle size Distribution	EN 933-1	1 per week
		Particle density	EN 1097-6	1 per month
		Resistance to fragmentation (LA)	EN 1097-2	2 per year
		Classification of constituents(see table B3)	EN 933-11	1 per month
		Water soluble sulfate	EN 1744-1	1 per month

2.5.2 Sampling and Testing

Sampling and testing ***is carried out by an accredited local contractor*** who is contacted to arrange to take samples for off-site analysis at a ***UKAS accredited laboratory***.

Records of samples and tests requested to the accredited contractor is made using the ***Aggregate Sample Analysis Request Form*** provided in ***Appendix 1.2***

Where the operator ***/ manufacturer decides or requires to undertake their own samples*** and / ***or testing***, then arrangements ***for training for these procedures*** and / or testing shall be made ***and recorded***.

2.6 Dispatch

2.6.1 Delivery Documentation

On supply of recovered non-waste aggregates to the customer, ***the following information is provided*** on the ***Delivery Note***

- **The type of aggregate supplied:** General Granular Fill (Class 1B)
- **Manufacturers Quality Statement:** This aggregate was produced under a quality management scheme conforming to the Aggregates Quality Protocol
- **Place of manufacture:** ACD Skips Ltd
  George Thomas Avenue
  Brynmenyn Industrial Estate
  Brynmenyn
  Bridgend
  CF32 9SQ

Records of all delivery notes and testing shall be made and ***kept for a minimum of 5 years***, the results of the testing and quality control procedures of the product(s) supplied shall also be made available to the customer if requested.

2.7 Records and Documentation

2.7.1 Records to be Maintained

The records required to be kept by the manufacturer with this Factory Production Control System (in conjunction to those required by the environmental permit) are specified below:

- Training and Certificates
- Maintenance and Calibration of Plant and Equipment
- Testing Results
- Sampling and Analysis Requests **Appendix 1.2**
- Waste Acceptance Forms **Appendix 1.1**
- Materials Supplied **Delivery Notes**
- Site Inspections / Production Monitoring / Irregularities
- Reviews / Changes to the **Factory Production Control System & Control Records**
- Results of internal and external **Audits of the Quality Management Scheme**

End.