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ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
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LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT



VALENCIA WASTE MANAGEMENT LTD

SHELFORD LANDFILL VARIATION APPLICATION (EPR/XP3434HX)

OPERATING TECHNIQUES

NOVEMBER 2023

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OPERATING TECHNIQUES

NOVEMBER 2023

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Appendix 1 Plant List
Appendix 2 Process Flow Diagram

DRAWINGS	TITLE	SCALE
SHF118	Proposed MRF Location	1:1000@A3

1 INTRODUCTION

- 1.1.1 Wardell Armstrong has been appointed to prepare an application to vary the permit for Shelford Landfill Site at Shelford Farm Estate near Kent. The site is operated by Valencia Waste Management Ltd (Valencia) under permit number EPR/XP3434HX.
- 1.1.2 The site is permitted to accept non-hazardous commercial, industrial and household waste for disposal, as well as for the treatment of leachate arising from the landfill.
- 1.1.3 Valencia is seeking to prevent recyclable and recoverable wastes from going to disposal, in accordance with the principles of the waste hierarchy. The variation will allow mixed non-hazardous waste arriving at the landfill to be first treated to recover metals, wood and plastics for recycling, then further treated to remove non-combustible material to prepare the combustible wastes for energy recovery off-site. The residual non-combustible waste will be utilised in landfill engineering or will be placed in the landfill.
- 1.1.4 Section 2 sets out the new activities to be undertaken at the site, whilst section 3 sets out the waste acceptance procedures for the treatment process.
- 1.1.5 Section 4 describes the waste treatment activity and the way in which it is managed and section 5 describes the measures in place to minimise any impacts on the amenity of the locality from the new activity. Otherwise the site will continue to operate in accordance with the agreed management system and plans set out in the Environmental Permit.
- 1.1.6 The location of the MRF building is shown on drawing SHF118.

2 NEW ACTIVITIES

- 2.1.1 A new installation will be included in the permit, listed under Section 5.4 A(1) (b) (ii), i.e. a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving pre-treatment of waste for incineration or co-incineration.
- 2.1.2 There will also be a new waste activity for manual sorting and transfer of waste.
- 2.1.3 The activities and their relevant waste disposal and waste recovery codes are set out in Table 2.1, below.

Table 2.1: Waste Activities	
Activity	D or R Code
Separation of combustible waste from non-combustible waste where EfW has R1 status	R3 Recycling /reclamation of organic substances that are not used as solvents
Separation of wood and plastic for recycling.	R3 Recycling /reclamation of organic substances that are not used as solvents
Separation of ferrous metal and non-ferrous metal from mixed waste pending recycling elsewhere	R4 Recycling /reclamation of metals and metal compounds
Separation of stone, brick, glass etc for use in roads	R5 recycling/reclamation of other in-organic materials
Storage of incoming waste and storage of treated wastes pending transfer to R1 status EfW facility, metal recycling site.	R13 storage of waste pending any of the operations numbered R1 to R12
Storage of waste pending transfer to landfill	D15 storage of waste pending any of the operations D1 to D14.

- 2.1.4 The wastes that may be stored or treated in the MRF building would be as listed in Table 2.2. These wastes will undergo mechanical treatment to recover metals and inert materials and prepare the waste for incineration.

Table 2.2. Wastes for Mechanical Treatment	
Waste Code	Description
01	WASTES RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
01 01	Wastes from mineral excavation
01 01	Wastes from mineral metalliferous excavation
01 01 02	Wastes from mineral non-metalliferous excavation

Table 2.2. Wastes for Mechanical Treatment	
Waste Code	Description
01 04	Wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	Waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	Waste sand and clays
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
10 12	Wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 06	Discarded moulds
10 12 08	Waste ceramics, bricks, tiles and construction products (after thermal processing)
10 12 12	Wastes from glazing other than those mentioned in 10 12 11
10 13	Wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 14	Waste concrete
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED
15 01	Packaging (including separately collected municipal packaging waste)
15 01 01	Paper and cardboard packaging
15 01 02	Plastic packaging
15 01 03	Wooden packaging
15 01 04	Metallic packaging
15 01 05	Composite packaging
15 01 06	Mixed packaging
15 01 07	Glass packaging
15 01 09	Textile packaging
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 07	Mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	Wood, glass and plastic

Table 2.2. Wastes for Mechanical Treatment	
Waste Code	Description
17 02 01	Wood
17 02 02	Glass
17 02 03	Plastic
17 03	Bituminous mixtures, coal tar and tarred products
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01
17 04	Metals (including their alloys)
17 04 01	Copper, bronze, brass
17 04 02	Aluminium
17 04 03	Lead
17 04 04	Zinc
17 04 05	Iron and steel
17 04 06	Tin
17 04 07	Mixed metals
17 04 11	Cables other than those mentioned in 17 04 10
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 09	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
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
19 01	Wastes from incineration or pyrolysis of waste
19 01 02	Ferrous materials removed from bottom ash
9 02	Wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	Premixed wastes composed only of non-hazardous wastes
19 02 10	Combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 04	Vitrified waste and wastes from vitrification
19 04 01	Vitrified waste

Table 2.2. Wastes for Mechanical Treatment	
Waste Code	Description
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	Paper and cardboard
19 12 02	Ferrous metal
19 12 03	Non-ferrous metal
19 12 04	Plastic and rubber
19 12 05	Glass
19 12 07	Wood other than that mentioned in 19 12 06
19 12 08	Textiles
19 12 09	Minerals (for example sand, stones)
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	Wastes from soil and groundwater remediation
19 13 02	Solid wastes from soil remediation other than those mentioned in 19 13 01
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	Separately collected fractions (except 15 01)
20 01 01	Paper and cardboard
20 01 02	Glass
20 01 38	Wood other than that mentioned in.20 01.37
20 01 39	Plastics
20 01 40	Metals
20 02	Garden and park wastes (including cemetery waste)
20 02 02	Soil and stones
20 03	Other municipal wastes
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 07	Bulky waste

3 WASTE ACCEPTANCE

- 3.1.1 Up to 250,000 tonnes of additional waste may be accepted at the site each year and be treated through the recycling plant. Waste for treatment may be a mix of those waste streams already accepted at the landfill and new waste streams.
- 3.1.2 Assuming the initial period of operation is successful Valencia may expand the plant at a later date to further improve recycling rates.
- 3.1.1 It is expected that this quantity of waste will not impact significantly on deliveries of waste to site as the majority of the waste to be treated is currently accepted into the landfill. There will of course be an increase in vehicle movements to take recyclate and RDF off site.
- 3.1.2 There will be an element of hand sorting of wastes at the front end, depending on the waste load and the most effective method of recovering recyclate. Such waste would be move directly to the appropriate bay or container ready to be taken off site.
- 3.1.3 The waste types are very similar to those already accepted on site, therefore the Waste Pre-Acceptance and Acceptance will continue in line with the existing procedures. At the pre-acceptance stage, each waste stream will be allocated to either the treatment plant or the landfill and this will be clearly recorded in the waste information form so it is apparent to weighbridge staff when the waste arrives on site.
- 3.1.4 Waste arriving at the site will be directed to the weighbridge to be weighed and inspected by a weighbridge operator. The transfer note will be checked against the pre-acceptance information and, wherever possible, a visual inspection of the waste will be made. If all is in order, the weighbridge operator will direct the load to the appropriate unloading point, whether that is the active non-hazardous landfill cell or the MRF building. Non-permitted and other non-conforming waste types will be returned to the site of origin or re-directed to an appropriately permitted facility.
- 3.1.5 Waste loads received at the MRF building will tipped into the waste reception area. Loads will be inspected during unloading to ensure that they are compliant with the permit and whether they are suitable for waste treatment.
- 3.1.6 Those wastes listed in Table 2.2 will be stored in a dedicated bay pending treatment through the mechanical treatment plant.

4 MECHANICAL TREATMENT

- 4.1.1 Non-hazardous waste arriving at the site will be received inside a building to provide containment for litter, dust, noise and odour. Waste will be unloaded inside the building with the doors closed and placed in the dedicated waste reception bay.
- 4.1.2 Waste is to be sorted into a range of different waste streams for recycling or recovery. Appendix 1 provides the specification of the waste sorting equipment to be used on site, and Appendix 2 provides a process flow diagram. A written description of the process is given below.
- 4.1.3 Wastes to be treated through the MRF should be in fraction sizes less than 300mm in any direction. To facilitate this, a shredder will be provided and, where necessary, waste will be treated through the shredder to ensure the correct particle size entering the plant. As an additional safeguard, a long part separator will be placed between the shredder and the other MRF equipment to remove any long pieces of material that might damage the plant. Long parts will be sent to the landfill.
- 4.1.4 The waste will then pass via a combi screen which will separate the waste into three sizes:
- <10mm fines, treated as residual waste with no further sorting;
 - 10-60mm, sent to a 2-way density separator via an overband magnet
 - 60-300mm, sent to the 4-way separator.
- 4.1.5 The 10-60mm fraction will pass on a conveyor under an overband magnet in order to remove ferrous metal. Ferrous metals will be placed in a dedicated bay pending removal to a permitted metal recycling site.
- 4.1.6 The 10-60mm fraction then passes through a 2-way density separator, which will separate waste by weight, producing a light fraction and a heavy fraction. The 10-60mm light fraction will be collected as residual waste.
- 4.1.7 The heavier waste will pass through an eddy current separator with magnet drum to separate any ferrous and non-ferrous metal from the remaining heavy waste. Ferrous and non-ferrous metal will be directed to dedicated storage bays pending removal to a metal recycling site. Following mechanical treatment, the remaining heavy waste will pass through a picking station to allow final quality control on the outputs.
- 4.1.8 The larger material (50-300mm) will pass to a 4-way separator. This will separate waste by weight, producing a super light fraction, a light fraction, a mid-heavy fraction

and a heavy fraction. The super light fraction will be sent off site as high calorific value (CV) RDF.

- 4.1.9 The light fraction will be sent to an optical sorter, which will separate plastics from the residual waste. The residual fraction will be sent off site a low CV RDF. The plastics will undergo picking and quality control to separate any remaining non-plastic into a separate storage bay. Plastic will be sent off site for recycling.
- 4.1.10 The 60-300mm mid-heavy fraction will be sent to an optical sorter to separate wood and rigid plastic from the remaining residual waste. These two waste streams will pass through a picking station for quality control and will then be stored in dedicated bays pending being sent off site for recycling.
- 4.1.11 The residuals will pass via a magnet to segregate any ferrous metal for recycling, with remaining residual waste sent to the landfill.
- 4.1.12 The 60-300mm heavy fraction will pass via an inline magnet where ferrous metal will be collected in a dedicated bay pending removal to a metal recycling site. The remaining heavies will join the 10-60mm heavies for picking and quality control.
- 4.1.13 Plastic, wood, residual waste and heavy waste that passes through the picking station will be sorted by hand by trained site operatives to remove any materials remaining in the wrong stream and ensure it is directed to the correct storage bay.
- 4.1.14 Where it is confirmed to be non-hazardous all residual waste will be placed in the landfill.
- 4.1.15 The heavy fraction is expected to contain a high content of grit, stone, glass etc it will be used within the landfill for maintaining site roads and for daily cover.
- 4.1.16 Once it has been evidenced that it is non-hazardous, the <10mm fines and the residual waste will be placed in the landfill or where appropriate used as landfill cover. Any hazardous fines will be sent off site to a permitted hazardous waste facility.

5 OUTGOING WASTES

5.1 Fate of Sorted Materials

5.1.1 Ferrous and non-ferrous metals will be stored in dedicated bays and then will be loaded into a vehicle and removed to a permitted metal recycling site. Metals will not be stored for more than 1 month.

5.1.2 The heavy material is expected to be largely inert. This material will be stored in a dedicated bay or may be stockpiled on the landfill awaiting use in engineering works. Heavy material will not be stored for more than 6 months.

5.1.3 High CV RDF and Low CV RDF will be stored in dedicated bays and then loaded onto vehicles for direct transfer to the Energy from Waste Plant (EfW). As the material is loose RDF, it will be removed daily and all such waste will be transferred to the EfW within 48 hours of being received on site.

5.1.4 Wood and plastic will be stored in dedicated storage bays before being loaded into vehicle and sent off site for recycling. Wood and plastic will not be stored for more than 1 month.

5.1.5 Fines and residual waste will be removed to the landfill within 72 hours except where they need to be held for a longer period pending results from the laboratory to confirm their classification. Should any fines be classed as hazardous waste they will be loaded onto a vehicle and removed to a permitted hazardous waste site. A consignment note will be completed. Non-hazardous fines may be used as landfill cover providing that they are not dusty or odorous. Any other fines/residual waste will be landfilled.

5.1.6 All fines and residual waste will be stored in a dedicated bay inside the building until they are moved for final disposal.

5.2 Testing of Trommel Fines

5.2.1 There is an expectation that as only non-hazardous wastes are proposed to be treated on site, the fines will also be non-hazardous. However, 19 12 12 is a mirror entry in the list of waste codes and it is known that some trommel fines classify as hazardous waste.

5.2.2 To ensure the quality of the outputs, only a limited number of wastes will be treated through the trommel. The composition of the fines is therefore expected to be relatively consistent.

- 5.2.3 To ensure the fines are properly classified, 2 samples per day will be taken during the first month of operation. The waste types accepted over this month of operation are anticipated to be representative of the average feedstock to be processed throughout the operational life of the facility. The samples will be subject to testing in line with the Environment Agency's WM3 guidance to confirm their classification.
- 5.2.4 If the results show that the wastes are non-hazardous throughout this period, testing will cease after the first month. Thereafter, one sample of trommel fines will be taken each year to assess whether anything has changed.
- 5.2.5 Should any samples within the first month return a result showing that the fines are hazardous an assessment will be made to determine whether the results are statistically significant and, where necessary, a sampling programme will be drawn up to ensure that all wastes are correctly classified and disposed of legally going forward.
- 5.2.6 Likewise, should there be a significant change in the waste source(s) used as a feedstock to the facility identified (e.g. during pre-acceptance checks) as potentially impacting the composition and classification of the trommel fines, additional sampling and testing will be undertaken to assess whether anything has changed and to ensure that all wastes are correctly classified and disposed of legally going forward.

6 ENVIRONMENTAL PROTECTION

6.1 General

6.1.1 The main purpose of the variation is to prevent recyclable and recoverable wastes from going to disposal, following the principles of the waste hierarchy. There will therefore be an overall environmental benefit in reduced use of raw materials (by recycling metals) and reduced carbon emissions (by recycling metals and recovering energy from combustible waste).

6.1.1 Nevertheless, it is important that this is carried out without harm to the local environment. In order to minimise emissions, the activities will take place inside a building.

6.1.2 The site will be kept tidy and will be inspected on a daily basis to make sure that no pollution is occurring. Any significant emissions of dust, odour, litter or noise will be investigated and remedied.

6.1.3 All plant and equipment will be properly maintained so that it is fit for purpose and operates without excessive noise.

6.1.4 The site will be managed by a technically competent manager in accordance with Valencia's written Environmental Management System.

6.1.5 As the majority of receptors are more than 200m away, potential emissions of dust, noise or odour are not expected to cause a nuisance or harm to sensitive habitats or human receptors. The facility has been designed to prevent emissions of dust and minimise potential impacts on nearby sensitive receptors, as demonstrated by the Environmental Risk Assessment accompanying the permit application.

6.2 Contaminated Run-Off

6.2.1 Waste is unloaded, treated and stored inside the building and therefore it is protected from precipitation and run-off will be minimal.

6.2.2 The building is provided with an impermeable reinforced concrete floor, ensuring that no leachate will enter soils under the site. The seam between the MRF building walls and floor is sealed, and 90mm sleeping policeman ramps are placed at the MRF entrances and exits, preventing the escape of any emissions to land or water. The floor is designed hold up to 392m³, which will capture any leachate should a load with any free liquid be received. The building is also designed to capture fire water in its footprint in the event of a fire.

6.3 Litter

- 6.3.1 Measures will be in place to prevent litter. Waste will be unloaded inside the waste MRF building. The building will be fitted with fast acting roller shutter doors which will, as far as possible, be kept closed except for allowing vehicle access and egress.
- 6.3.2 Waste will be stored in dedicated storage bays or containers.
- 6.3.3 Daily inspections will be made and any loose waste noted lying around will be collected and transferred to the appropriate bay or container.
- 6.3.4 Incoming and outgoing vehicles will be enclosed or have appropriate sheeting to contain any waste.

6.4 Dust

- 6.4.1 To minimise emissions of dust incoming and outgoing vehicles will be enclosed or have appropriate sheeting to contain any waste.
- 6.4.2 Waste types accepted at the facility do not include those that are anticipated to be a risk of generating excessive dust.
- 6.4.3 Waste will be unloaded inside the waste transfer station and as far as possible the fast acting roller shutter doors will be kept closed to contain emissions.
- 6.4.4 Localised air extraction is provided for the 3 way separator. This will draw air from the separator via a dust filter before returning air inside the building.
- 6.4.5 A spray bar is provided where the light materials leave the 3 way separator to minimise dust.
- 6.4.6 There are no point source emissions to atmosphere external to the building.
- 6.4.7 Daily inspections will be made to ensure that dust is not being emitted from the building. Where emissions of dust are noted, the cause will be investigated and remedied.

6.5 Odour

- 6.5.1 Waste will be accepted and dispatched in enclosed or sheeted vehicles.
- 6.5.2 There is no intention to treat putrescible waste. Household waste and similar materials, with a high proportion of food waste or other putrescible material, will be identified at the pre-acceptance stage and will be directed to the landfill. Only wastes

with a low putrescible content, such as construction and demolition wastes and some commercial and industrial wastes, will be directed to the MRF.

6.5.3 Waste will be dealt with on a first in first out basis and will be turned round within 72 hours to minimise the risks of odour and vermin. All bays will be emptied on a regular basis.

6.5.1 Waste will be unloaded inside the MRF building. The building will be fitted with fast acting roller shutter doors which will, as far as possible, be kept closed except for allowing vehicle access and egress.

6.5.2 A daily olfactory inspection will be made and if there is any noticeable odour at the site boundary, the source will be investigated and remedial action will be taken. Odorous loads will be prioritised for removal from site.

6.6 Vermin and Pests

6.6.1 Waste will be stored unloaded and stored inside the building to limit access to pests and vermin.

6.6.2 Wastes containing a high level of putrescible waste will not be treated.

6.6.3 Waste will be turned round within 72 hours to prevent conditions that would allow pests to become established.

6.6.4 A pest control contractor will be retained and will make routine inspections, taking appropriate action to control vermin and pests.

6.6.5 The daily inspection will include assessing the presence of rats, flies or other pests. Where there is an indication that there is an infestation the pest contractor will be contacted to attend site as soon as possible to manage the problem.

6.7 Noise

6.7.1 The site is not expected to cause any noise issues as the nearest sensitive receptors as the building is in an industrial setting and the majority of receptors are over 200m away, it is considered unlikely that the cumulative noise from the operation will adversely impact local human or habitat receptors. The new activities will take place inside a building giving a degree of attenuation.

6.7.2 Plant and equipment will be properly maintained so that it operates without excessive noise.

7 RECORD KEEPING

7.1.1 The records described below will be maintained at the site office and will be made available to warranted officers of the Environment Agency on request:

- The pre-acceptance record for each waste stream and copies of related transfer notes.
- Details of all waste taken off site with a copy of the appropriate transfer note.

7.1.2 A site log will be maintained with the results of daily amenity inspections and any actions taken as a consequence and a record of attendance by the technically competent manager.

7.1.3 A copy of the preventative maintenance programme showing plant has been properly inspected and maintained and when.

7.1.4 A log will be maintained detailing any complaints received and the actions taken to resolve them.

7.1.5 A log will be maintained of any pollution incidents and the action taken to remediate them.

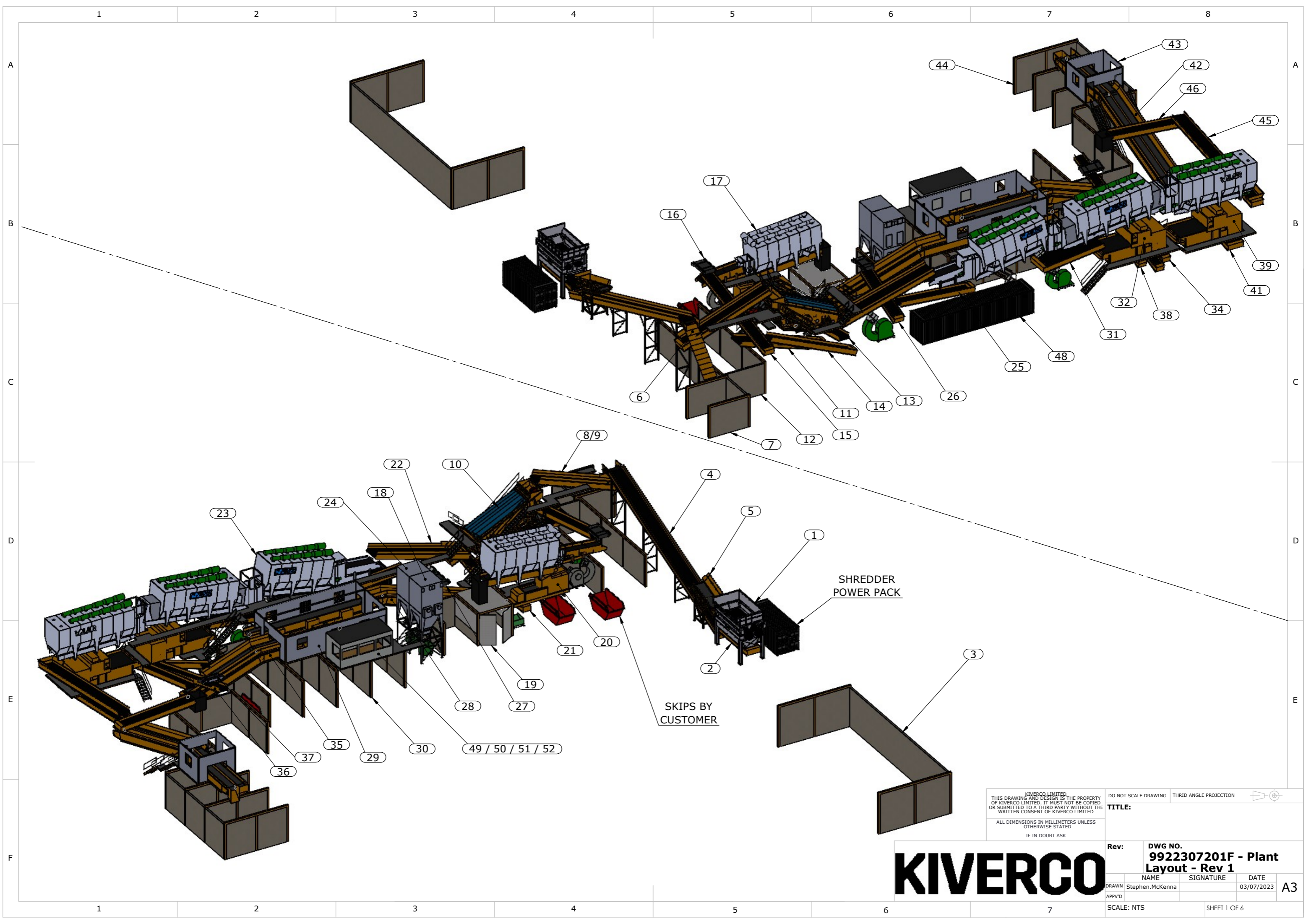
7.1.6 Records will also be kept regarding staff training.

7.1.7 Records will be kept for a minimum of two years and in line with any statutory requirements. Records of pollution incidents will be maintained indefinitely in order to inform any eventual surrender application.

APPENDICES

APPENDIX 1

Plant List



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<small>ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED IF IN DOUBT ASK</small>				
Rev:		DWG NO. 9922307201F - Plant Layout - Rev 1		
<small>DRAWN</small> Stephen.McKenna	<small>SIGNATURE</small> 	<small>DATE</small> 03/07/2023	A3	
<small>SCALE: NTS</small>		<small>SHEET 1 OF 6</small>		

KIVERCO

Item	Detail	Width (m)	Length (m)	Item Installed Power (kW)	Control
1	M&J PreShred 6000S			501.1	Metso Control Panel
2	Shredder Collection Conveyor	1.40	5.50	7.5	Kiverco Control Panel
3	Shredded Bulky Waste Bay				
4	Incline Conveyor	1.40	22.00	7.5	Kiverco Control Panel
5	Belt Feeder Conveyor 1.2m x 4m	1.20	4.00	2.2	Kiverco Control Panel
6	Long Part Separator			1.5	Kiverco Control Panel
7	Longs Bay				
8	Screen Feed Conveyor	1.40	10.00	7.5	Kiverco Control Panel
9	Belt Weighing Scales				
10	Combi Screen	2.40	7.0	45	Kiverco Control Panel
11	0-10mm Collection Conveyor	1.60	10.00	5.5	Kiverco Control Panel
12	Fines Bay				
13	10-60mm Collection Conveyor	1.00	3.50	5.5	Kiverco Control Panel
14	10-60mm Transfer Conveyor	1.00	10.00	5.5	Kiverco Control Panel
15	10-60mm Transfer Conveyor 2	1.00	12.00	5.5	Kiverco Control Panel
16	Magnapower Inline Overband Magnet			3	Kiverco Control Panel
17	Walair 2-Way Drum Separator			50.2	Kiverco Control Panel
18	Walair Dust Filter			1.24	Kiverco Control Panel
19	10-60mm Lights & FE Metals Bays				
20	Magnapower Eddycurrent Separator			7.9	Kiverco Control Panel
21	ECS Residue Collection Conveyor	0.80	4.00	5.5	Kiverco Control Panel
22	+60mm Collection Conveyor	1.60	10.50	5.5	Kiverco Control Panel
23	Walair 4-Way Drum Separator			147.6	Kiverco Control Panel
24	Walair Dust Filter			1.24	Kiverco Control Panel
25	+60mm Heavies Collection Conveyor	1.00	8.00	5.5	Kiverco Control Panel
26	+60mm Heavies Transfer Conveyor	1.00	6.50	5.5	Kiverco Control Panel
27	Magnapower Inline Overband Magnet			4	Kiverco Control Panel
28	Heavies Picking Station Conveyor			4	Kiverco Control Panel
29	3 Bay Double Sided Picking Station Cabin			7.68	Kiverco Control Panel
30	Picking Station Bays				
31	Mid-Heavies Collection Conveyor	2.40	6.50	5.5	Kiverco Control Panel
32	Mistral+ 2800 Connect Full package			11.75	
33	Walair Dust Extraction - Optical Sorter			5.5	Kiverco Control Panel
34	Rigid Plastics Conveyor	0.80	10.50	5.5	Kiverco Control Panel
35	Mid-Heavies Picking Station Conveyor			4	Kiverco Control Panel
36	Residue Collection Conveyor	0.80	16.00	5.5	Kiverco Control Panel
37	Magnapower Overband Magnet			3	Kiverco Control Panel
38	Wood Collection Conveyor	0.80	9.50	5.5	Kiverco Control Panel
39	Mistral+ 2800 Connect Full package			12.45	
40	Walair Dust Extraction - Optical Sorter			5.5	Kiverco Control Panel
41	Lights Optical Collection Conveyor	1.60	11.00	5.5	Kiverco Control Panel
42	Lights Picking Station Conveyor			4	Kiverco Control Panel
43	1 Bay Double Sided Picking Station Cabin			3.03	Kiverco Control Panel
44	Lights Picking Bays				
45	Super Lights Collection Conveyor	1.20	15.00	7.5	Kiverco Control Panel
46	Super Lights Stockpile Conveyor	1.20	8.00	5.5	Kiverco Control Panel
47	Stair Access & Walkways				
48	Compressed Air System			73.3	Airwise Control Panel
49	Plant Electrical Control Room			0.03	Distribution Board
50	Control Panel				
51	Control Room Air Conditioning			12.6	Distribution Board
52	CCTV Camera System				
53	Plant Paint Colour - Kiverco Tan				
Total Installed Power				1018.82	kW

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DO NOT SCALE DRAWING THRID ANGLE PROJECTION

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED
 IF IN DOUBT ASK

TITLE:

Rev: **DWG NO.**

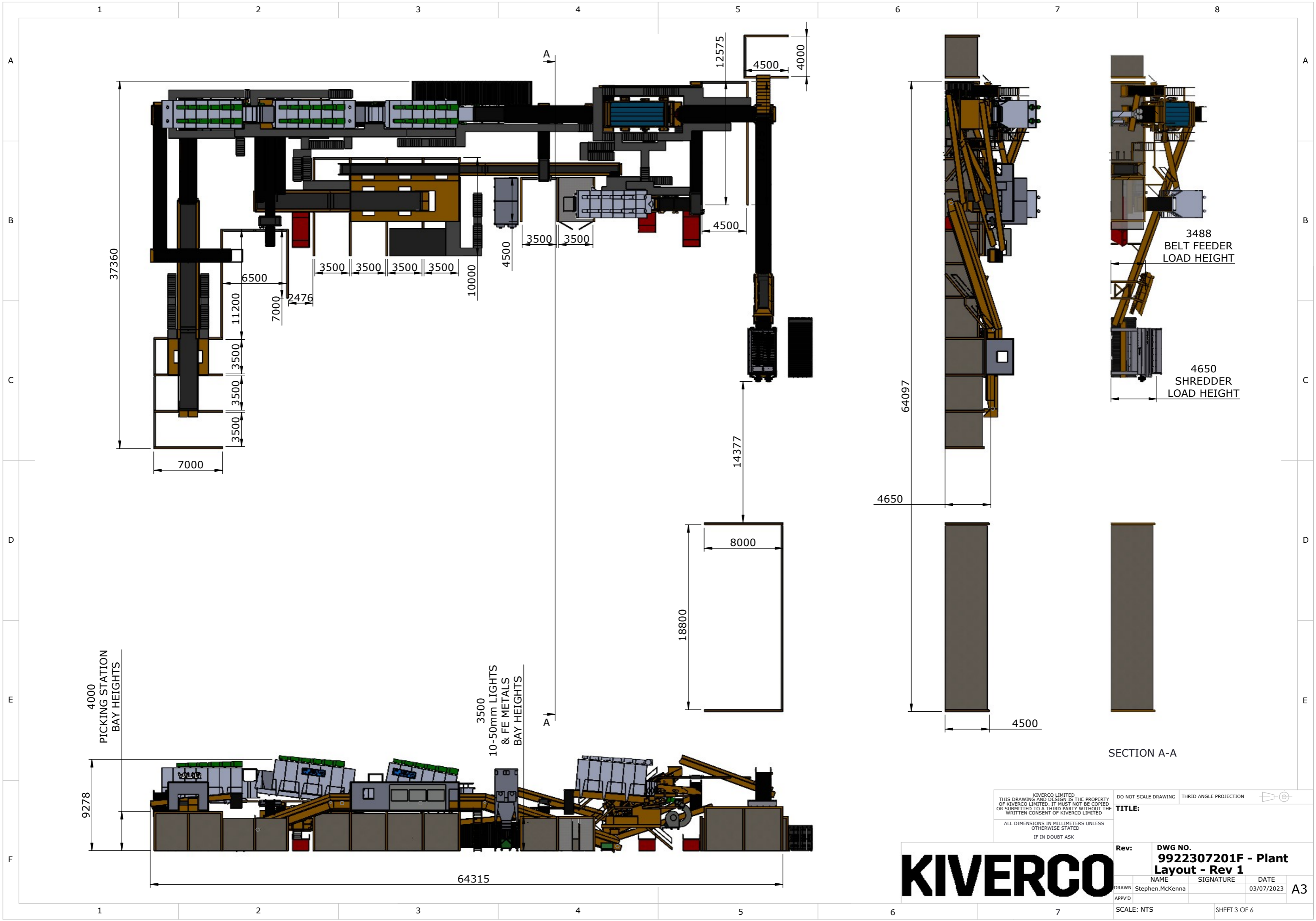
NAME SIGNATURE DATE
DRAWN Stephen.McKenna 03/07/2023

APPV'D

SCALE: NTS SHEET 2 OF 6



A3



4000
PICKING STATION
BAY HEIGHTS

3500
10-50mm LIGHTS
& FE METALS
BAY HEIGHTS

3488
BELT FEEDER
LOAD HEIGHT

4650
SHREDDER
LOAD HEIGHT

SECTION A-A

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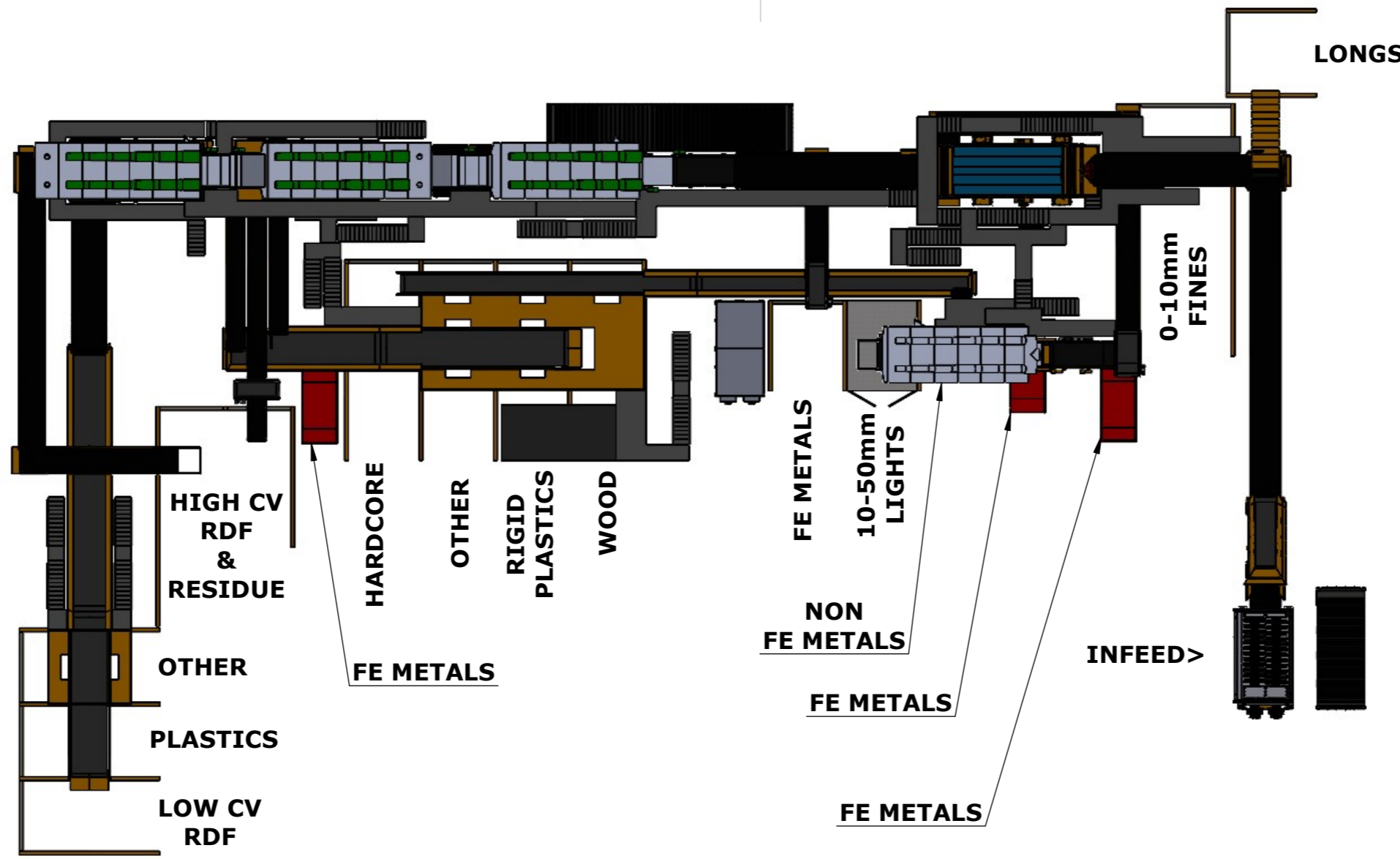
ALL DIMENSIONS IN MILLIMETERS UNLESS
OTHERWISE STATED
IF IN DOUBT ASK

TITLE:

KIVERCO

Rev:	DWG NO. 9922307201F - Plant Layout - Rev 1		
	NAME	SIGNATURE	DATE
DRAWN	Stephen.McKenna		03/07/2023
APPV'D			
SCALE: NTS	SHEET 3 OF 6		

A3



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DO NOT SCALE DRAWING THRID ANGLE PROJECTION
 TITLE:

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED
 IF IN DOUBT ASK

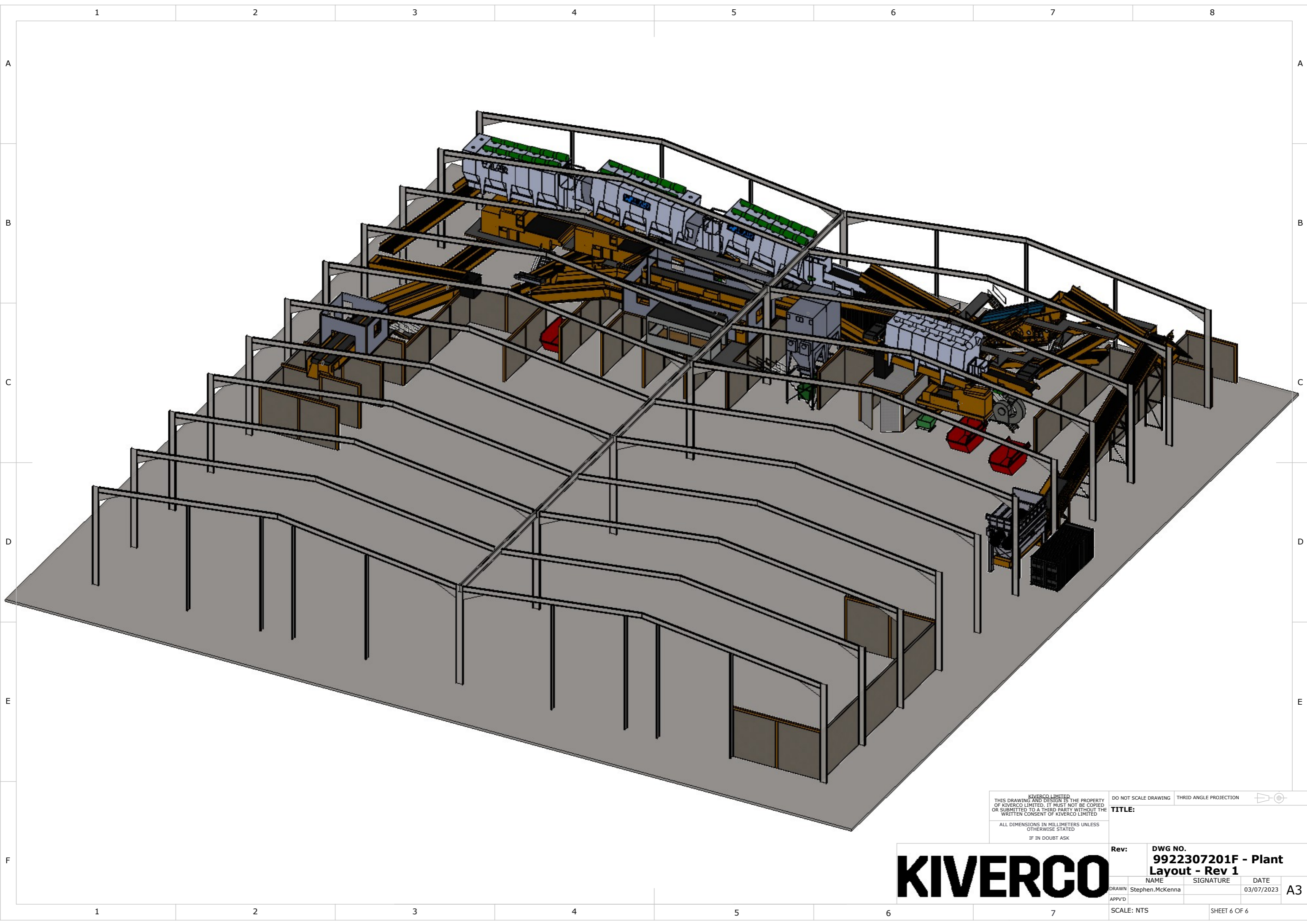
Rev:	DWG NO. 9922307201F - Plant Layout - Rev 1		
NAME	SIGNATURE	DATE	A3
Stephen.McKenna		03/07/2023	
APPV'D			

KIVERCO



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TITLE:				
<small>ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED IF IN DOUBT ASK</small>		Rev:	DWG NO. 9922307201F - Plant Layout - Rev 1	
DRAWN	NAME	SIGNATURE	DATE	A3
APPV'D	Stephen.McKenna		03/07/2023	
SCALE: NTS			SHEET 5 OF 6	

KIVERCO



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<small>ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED IF IN DOUBT ASK</small>		TITLE:		
		Rev:	DWG NO. 9922307201F - Plant Layout - Rev 1	
<small>DRAWN</small>	<small>NAME</small> Stephen.McKenna	<small>SIGNATURE</small>	<small>DATE</small> 03/07/2023	A3
<small>APPV'D</small>	<small>SCALE:</small> NTS		<small>SHEET</small> 6 OF 6	

APPENDIX 2

Process Flow Diagram

9922307201F- Process Flow – Rev 1

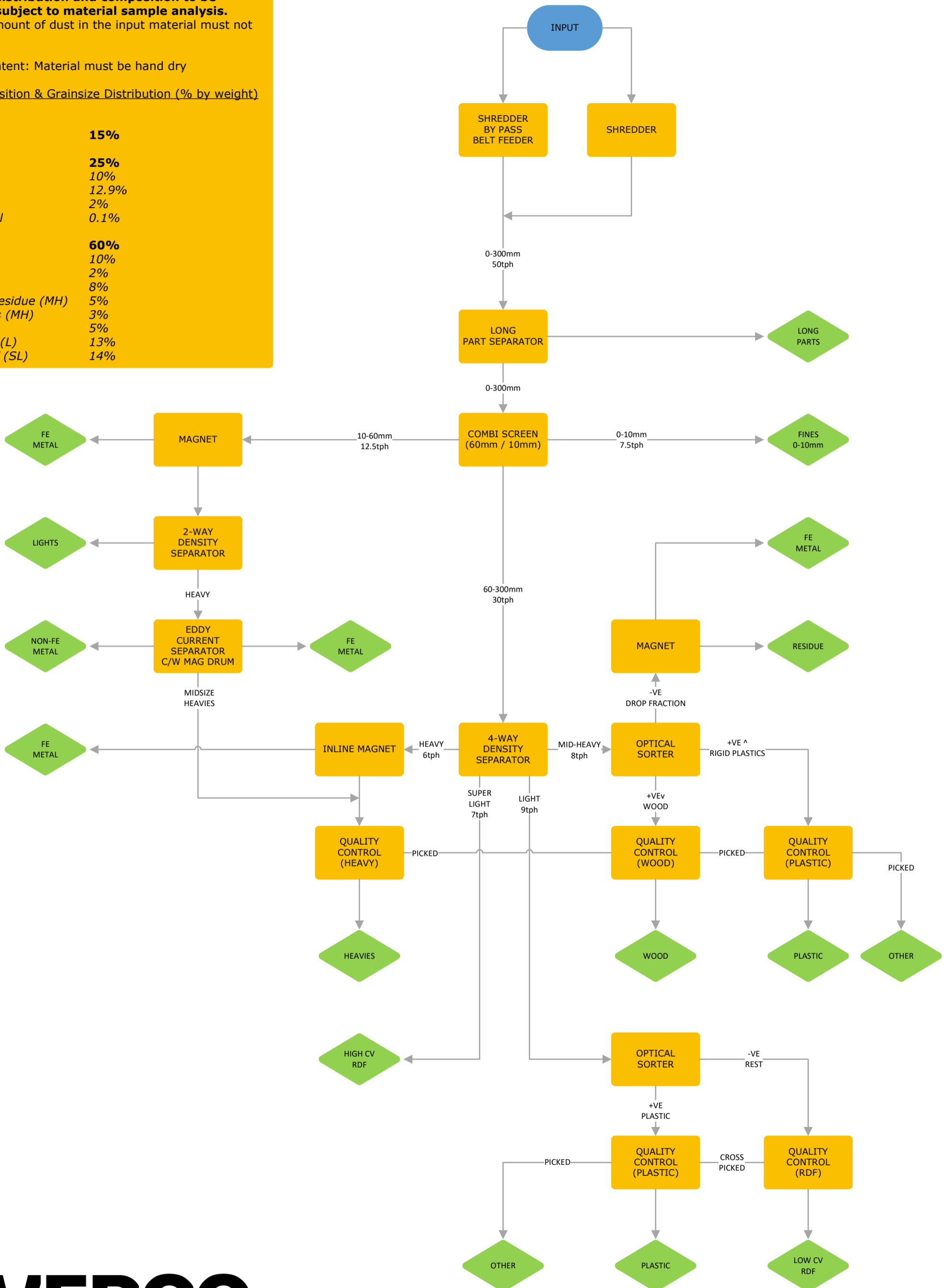
Material Type: C&D Residue
 Bulk Density: 250 kg/m³
 Throughput: up to 50 tonnes per hour
 Operating Hours: 8 hours/1 shifts/5 days/50 wks = 2,000 hrs/year

Grain size distribution and composition to be confirmed subject to material sample analysis.
 Maximum amount of dust in the input material must not be >3%

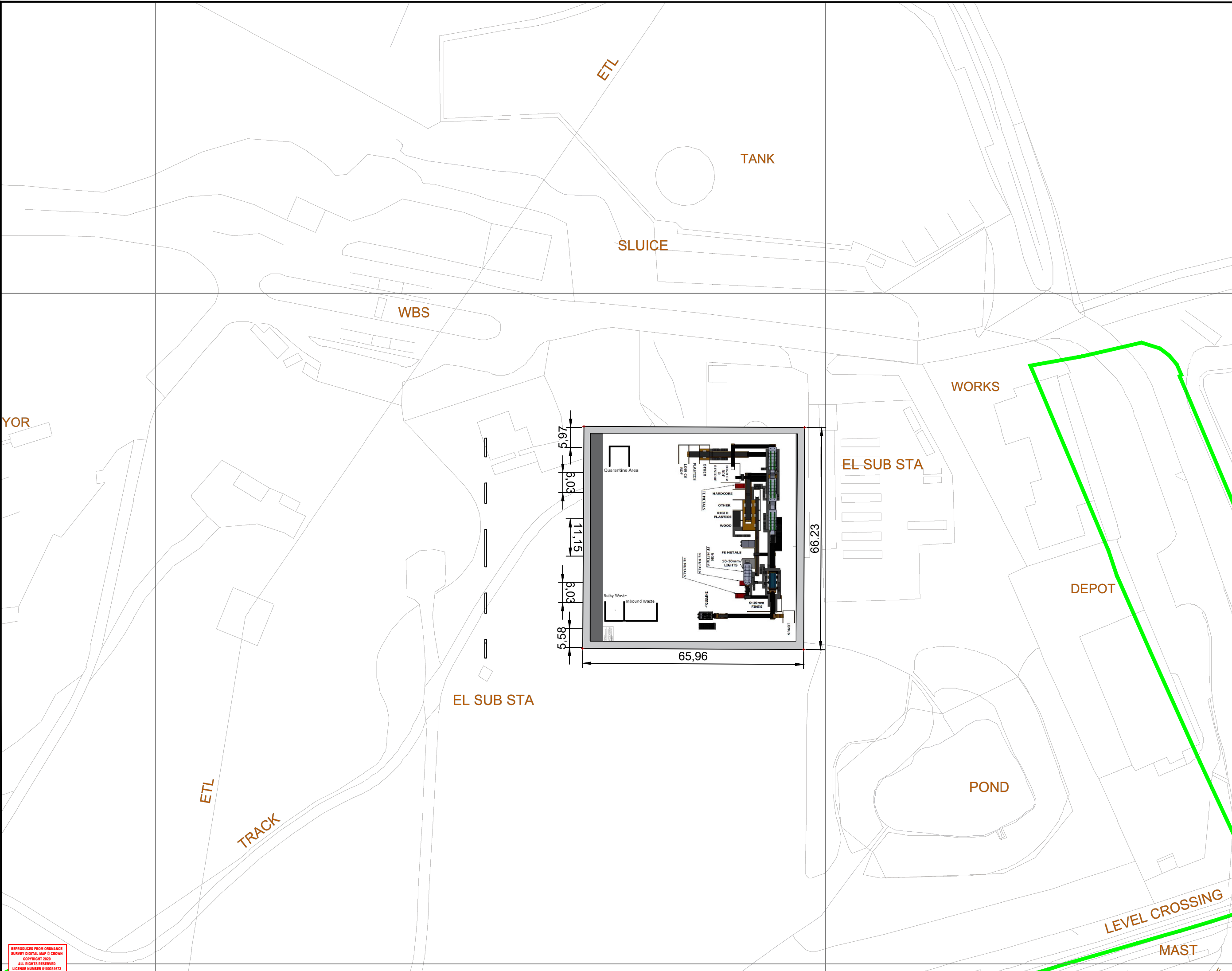
Moisture Content: Material must be hand dry

Input composition & Grainsize Distribution (% by weight)
 Assumed:

0-10mm	15%
10-60mm	25%
Heavy	10%
Light	12.9%
FE Metal	2%
Non-FE Metal	0.1%
60-300mm	60%
Hardcore (H)	10%
FE Metal (H)	2%
Wood (MH)	8%
Mid Heavy Residue (MH)	5%
Rigid Plastics (MH)	3%
Plastics (L)	5%
Low CV RDF (L)	13%
High CV RDF (SL)	14%



DRAWINGS



SITE NAME
**SHELFORD
LANDFILL**

DRAWING TITLE
**SITE
BOUNDARY
PLAN**

DRAWING NUMBER
SHF118

TASK NUMBER	10070
SCALE	1:1000 @A3
O/DRN	C Jones
O/DATE	18/09/2023
O/APP	
O/DATE	
REVISION A	
R/DRN	C Jones
R/DATE	19/10/2023
R/APP	
R/DATE	

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