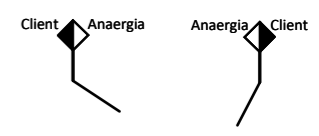
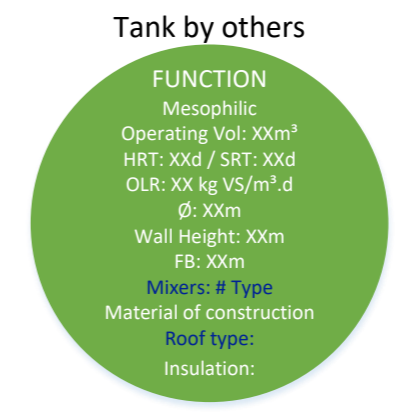
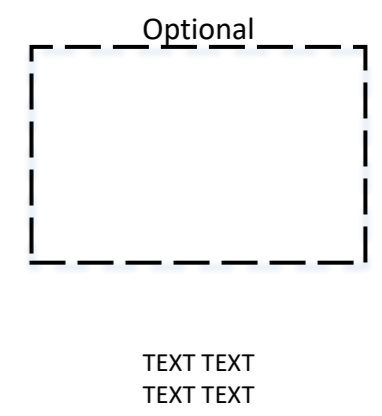
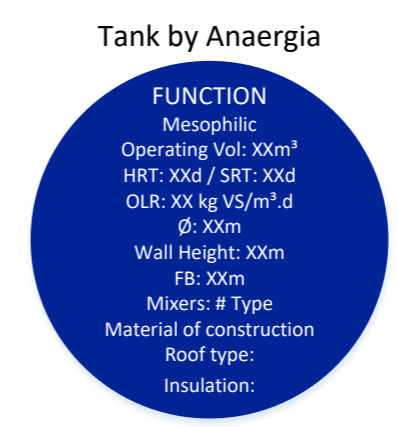
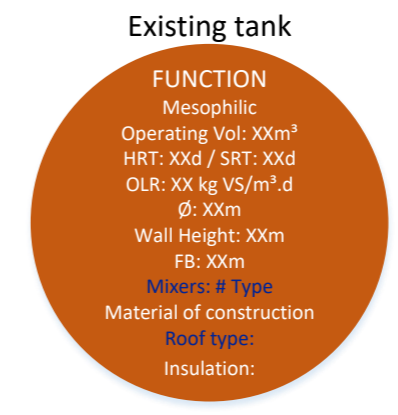


Site constructed tank (bolted steel or concrete)



Text in blue is the equipment provided by Anaergia



Prefabricated tank (HDPE or Stainless steel)



**Comments:**

1 ...

2 ...

3 ...

Rev.	Date	Creat.	Check.	Appr.	Comments

**Drawing Name:**

**Project:**

**Project-No:**

**Country:**

**Customer:**

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Packaged Food Waste		
ORG: Food Waste	95.0%	17 813
PAPER/CARD	1.5%	281
PLASTIC FILM	1.0%	188
RIGID PLASTIC	1.0%	188
GLASS	1.0%	188
FERROUS METAL	0.40%	75
NON-FERROUS METAL	0.10%	19
<b>Total</b>		<b>18 750</b>

Non-Packaged Food Waste		
ORG: Food Waste	99.0%	9 281
PAPER/CARD	0.0%	0
PLASTIC FILM	1.0%	94
RIGID PLASTIC	0.0%	0
GLASS	0.0%	0
FERROUS METAL	0.00%	0
NON-FERROUS METAL	0.00%	0
<b>Total</b>		<b>9 375</b>

Waste Definition					d/y	h/d	d/w	h/y	Input:	Combined Solid Food Waste
					350	14	7	4 900	t/y	28 125
Input										
Composition	FM	FM	FM	TS	TS	VS	VS	VS Fraction		
	[t/y]	[t/d]	[t/h]	[%]	[t/y]	[%]	[t/y]	[%]		
ORG: Food Waste	96.3%	27 094	77	5.5	30.0%	8 128	92.0%	7 478	98.6%	
PAPER/CARD	1.0%	281	1	0.1	50.0%	141	75.0%	105	1.4%	
PLASTIC FILM	1.0%	281	1	0.1	50.0%	141	0.0%	0	0.0%	
RIGID PLASTIC	0.7%	188	1	0.0	50.0%	94	0.0%	0	0.0%	
GLASS	0.7%	188	1	0.0	95.0%	178	0.0%	0	0.0%	
FERROUS METAL	0.3%	75	0	0.0	95.0%	71	0.0%	0	0.0%	
NON-FERROUS METAL	0.1%	19	0	0.0	95.0%	18	0.0%	0	0.0%	
<b>Total waste INPUT</b>	<b>100.00%</b>	<b>28 125</b>	<b>80</b>	<b>5.7</b>	<b>31.2%</b>	<b>8 770</b>	<b>86.5%</b>	<b>7 583</b>	<b>100.0%</b>	

Comments:

- 1 ...
- 2 ...
- 3 ...

Rev.	Date	Creat.	Check.	Appr.	Comments
Rev 1	04/02/2022	AP			As Built
Rev 0	06/07/2020	BJP	AP	JJ	

Drawing Name: 2.5 MW +1,000 Phase 1A  
 Project: Bio Dynamic, Nottingham  
 Project-No:  
 Country: UK  
 Customer: BioDynamic

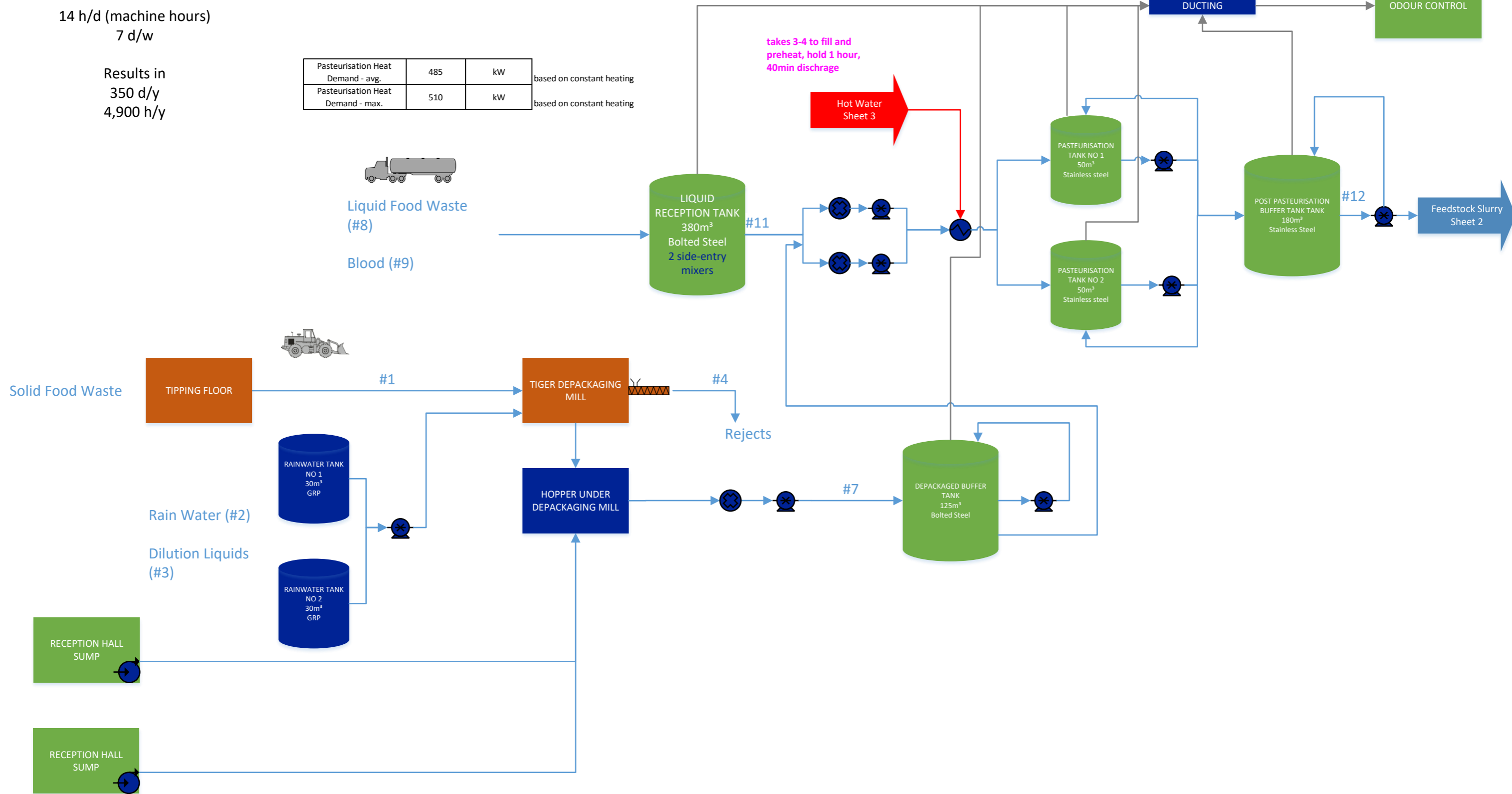


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14 h/d (machine hours)  
7 d/w


Results in  
350 d/y  
4,900 h/y

Pasteurisation Heat Demand - avg.	485	kW	based on constant heating
Pasteurisation Heat Demand - max.	510	kW	based on constant heating



**Comments:**  
1 ...  
2 ...  
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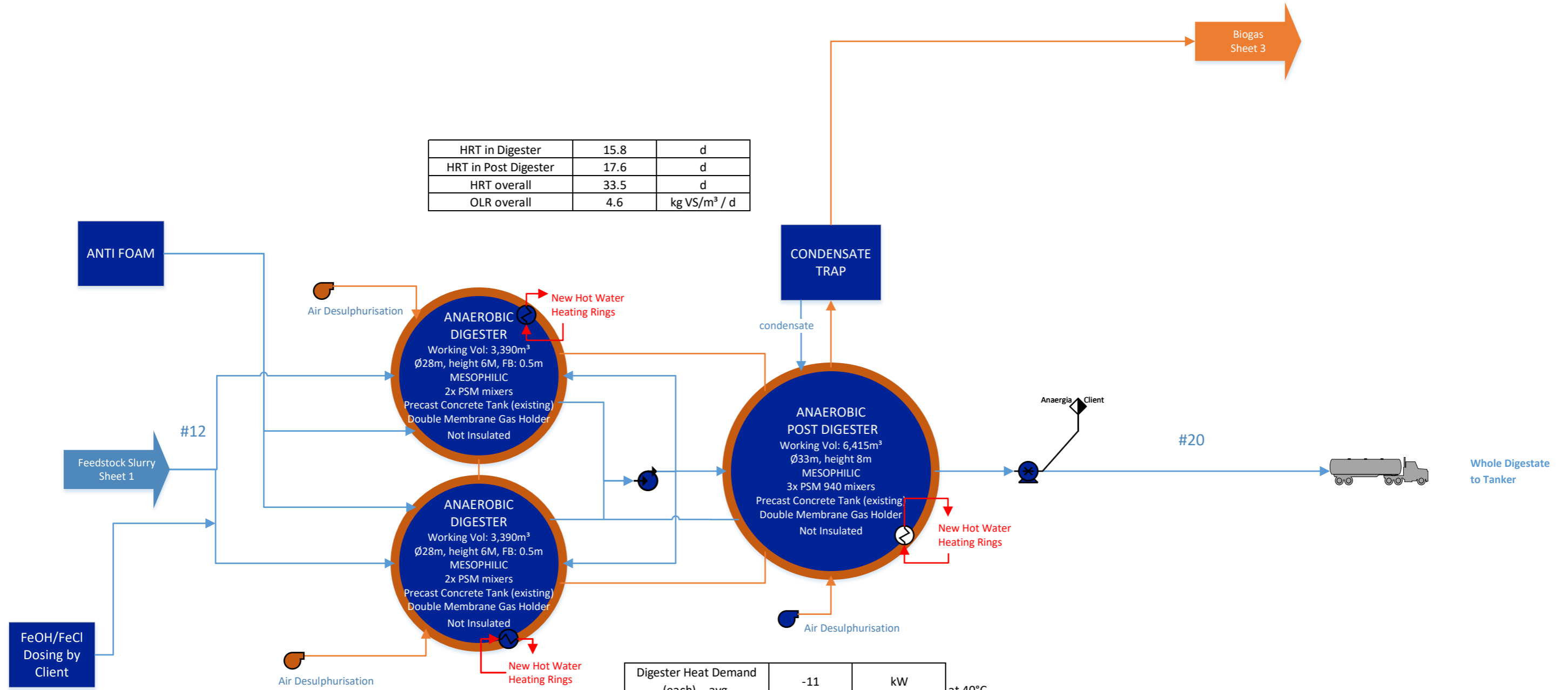
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<b>Drawing Name:</b> 2.5 MW +1,000 Phase 1A	
<b>Project:</b> Bio Dynamic, Nottingham	
<b>Country:</b> UK	
<b>Customer:</b> BioDynamic	

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365 d/y  
24 h/d  
=> 8 760 h/y


HRT in Digester	15.8	d
HRT in Post Digester	17.6	d
HRT overall	33.5	d
OLR overall	4.6	kg VS/m <sup>3</sup> / d



Digester Heat Demand (each) - avg.	-11	kW	at 40°C
Digester Heat Demand (each) - max.	59	kW	at 40°C
Post Digester Heat Demand (each) - avg.	364	kW	at 40°C
Post Digester Heat Demand (each) - max.	468	kW	at 40°C

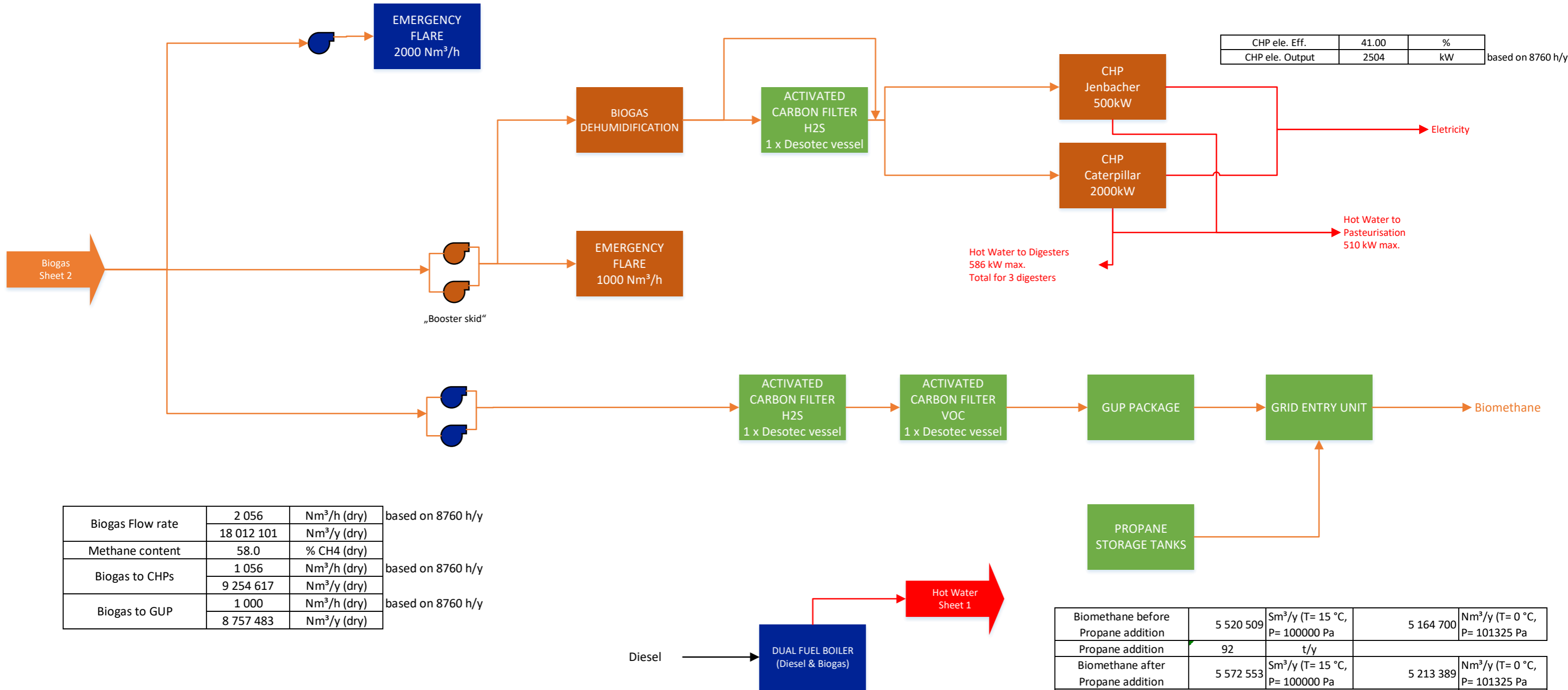
**Comments:**  
1 ...  
2 ...  
3 ...

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Rev 0	06/07/2020	BJP	AP	JJ	

<b>Drawing Name:</b> 2.5 MW +1,000 Phase 1A	
<b>Project:</b> Bio Dynamic, Nottingham	
<b>Project-No:</b>	
<b>Country:</b> UK	
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365 d/y  
 24 h/d  
 => 8 760 h/y




CHP ele. Eff.	41.00	%	based on 8760 h/y
CHP ele. Output	2504	kW	

Biogas Flow rate	2 056	Nm <sup>3</sup> /h (dry)	based on 8760 h/y
	18 012 101	Nm <sup>3</sup> /y (dry)	
Methane content	58.0	% CH <sub>4</sub> (dry)	
Biogas to CHPs	1 056	Nm <sup>3</sup> /h (dry)	based on 8760 h/y
	9 254 617	Nm <sup>3</sup> /y (dry)	
Biogas to GUP	1 000	Nm <sup>3</sup> /h (dry)	based on 8760 h/y
	8 757 483	Nm <sup>3</sup> /y (dry)	

Biomethane before Propane addition	5 520 509	Sm <sup>3</sup> /y (T= 15 °C, P= 100000 Pa)	5 164 700	Nm <sup>3</sup> /y (T= 0 °C, P= 101325 Pa)
Propane addition	92	t/y		
Biomethane after Propane addition	5 572 553	Sm <sup>3</sup> /y (T= 15 °C, P= 100000 Pa)	5 213 389	Nm <sup>3</sup> /y (T= 0 °C, P= 101325 Pa)

**Comments:**  
 1 ...  
 2 ...  
 3 ...

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<b>Drawing Name:</b> 2.5 MW +1,000 Phase 1A	
<b>Project:</b> Bio Dynamic, Nottingham	
<b>Project-No:</b>	
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<b>Customer:</b> BioDynamic	

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Handle	#1	#2	#3	#4	#8	#9	#11	#12	#20
Stream name	Solid Food Waste	Rain Water	Dilution Liquids	Depackaging Rejects	Liquid Food waste	Blood	Combined Liquid Feedstocks	Feed Blend to Digestion	Digestate
Operating days [d/y]	350	350	350	350	350	350	350	365	351
Operating hours [h/d]	14	14	14	14	14	14	14	24	24
Flow [t/y]	28 125	1 050	17 031	4 603	107 663	6 844	114 506	156 109	132 768
Flow [t/d]	80	3	49	13	308	20	327	428	378
Flow [t/h]	5.7	0.2	3.5	0.9	22.0	1.4	23.4	17.8	15.8
TS [%]	31.2%	0.0%	0.0%	23.4%	15.0%	10.0%	14.7%	15.7%	2.6%

**Comments:**  
 1 ...  
 2 ...  
 3 ...

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