## **Biomass Boilers at Waste Drying Plant, Gibson Lane, Melton, Hull, HU14 3HH**

# Air Quality Assessment and Odour Assessment – Schedule 5 Update

25<sup>th</sup> March 2021

#### PRESENTED TO

#### PRESENTED BY

#### Eco-Power Environmental Ltd Gibson Lane

Melton, Hull HU14 3HH

#### NALO, Tetra Tech Executive Park, Avalon Way, Anstey, Leicester, LE7 7GR

P +44 (0)116 234 8000 NALO.UK@tetratech.com

Prepared by:

Dr Zhiyuan Yang 25<sup>th</sup> March 2021 Principal Environmental Consultant

Contributor:

**Donald Towler-Tinlin** 25<sup>th</sup> March 2021 Environmental Consultant

Reviewed by:

Matthew Smith25th March 2021Senior Environmental Consultant

Authorised by:

Nigel MannDirector25th March 2021

i

#### **REVISION HISTORY**

Issue	Date	Status			
1	22 <sup>nd</sup> November 2019	First Issue (Report reference: A115848)			
2	2 24 <sup>th</sup> January 2020 Second Issue – inclusive of (1) odour assessment for dry operations; (2) Responses to the comments from Senior Environmental Control Officer of Yorkshire Council by the Investigations of potential increase of short-term impact or receptors by the waiting traffic adjacent to the level cross Gibson Lane (Report reference: A115848)				
3	14 <sup>th</sup> February 2020	Third Issue – Minor Amendment (Report reference: A115848)			
4	25 <sup>th</sup> March 2021	Fourth Issue – inclusive of responses to the EA's Notice of request for more information (a Schedule 5 Request) in respect of the air quality assessment and odour assessment (Report reference: 784- B027125)			

## TABLE OF CONTENTS

1.0 INTRODUCTION	3
1.1 Site location and context	3
1.2 Report Revision History	6
1.2.1 The First, Second and Third Issues of the Report	6
1.2.2 This Report Update	6
2.0 POLICY AND LEGISLATIVE CONTEXT	10
2.1 Documents consulted	10
2.2 Air quality legislative framework	11
2.3 Planning and policy guidance	
3.0 ASSESSMENT METHODOLOGY	15
3.1 Determining the impact magnitude of the air quality effects	15
4.0 BASELINE CONDITIONS	17
4.1 Air quality review	
4.2 Baseline/background concentrations inclusive of contributins from traffic emissions	
5.0 DETAILED DISPERSION MODELLING METHODOLOGY	19
5.1 Modelling parameter and averaging period	19
5.2 Sensitivie receptors	
5.3 Emission Sources	
5.3.1 Emission Sources from Boilers	
5.3.2 Emission Sources for Cumulative Impact Assessment	24
5.4 Model Scenarios	
5.4 Model Scenarios	
5.5 Meteorological Data	
5.5 Meteorological Data	
5.5 Meteorological Data 5.6 Surface Characteristics	
<ul> <li>5.5 Meteorological Data</li> <li>5.6 Surface Characteristics</li> <li>5.7 Building s in the Modelling Assessment</li> </ul>	30 31
<ul> <li>5.5 Meteorological Data</li> <li>5.6 Surface Characteristics</li> <li>5.7 Building s in the Modelling Assessment</li> <li>5.8 Treatment of Terrain</li> </ul>	30 31 31
<ul> <li>5.5 Meteorological Data</li> <li>5.6 Surface Characteristics</li></ul>	
<ul> <li>5.5 Meteorological Data</li> <li>5.6 Surface Characteristics</li></ul>	
<ul> <li>5.5 Meteorological Data</li></ul>	
<ul> <li>5.5 Meteorological Data</li></ul>	

6.5 Nitro	ogen Dioxide (NO <sub>2</sub> ) – Scenario 2 (Worst Case Operations)	46
7.0 HABITA	TASSESSMENT	54
7.1 Pred	dicted nitrogen oxide concentrations – Scenario 1	54
7.2 Pred	dicted nitrogen oxide concentrations – Scenario 2	56
8.0 CUMUL	ATIVE IMPACT ASSESSMETN RESULTS FOR THE PROTECTION HUMAN HEALTH	59
8.1 Nitro	ogen Dioxide (NO <sub>2</sub> ) – Cumulative Assessment	59
8.2 Part	ticulate Matter (PM10) – Cumulative Assessment	66
8.3 Part	ticulate Matter (PM <sub>2.5</sub> ) – Cumulative Assessment	71
8.4 Carl	bon monoxide (CO) – Cumulative Assessment	73
8.5 Sho	rt-Term No2 – Cumulative Assessment Including Level Crossing Traffic	74
9.0 ODOUR	ASSESSMENT FOR DRYING FLOOR AND BOILER OPERATINON	79
9.1 Proc	cess Descriptions	79
9.2 Odd	our Benchmarks	80
9.3 Odd	our Emission Sources	82
9.3.	1 Odour Emission from Drying Floor	82
9.3.	2 Odour Emissions from Wood Fuelled Boilers Stacks	84
9.4 Odd	our Assessmetn Receptors	85
9.5 Odd	our Modellign Assessment Results	86
9.6 Sen	sitivity Analysis – Inter-Annual Variability	89
10.0 ODOU	R COMPLAINT RECORDS	91
10 1 Co	mplaint Records	91
1011 00		

## LIST OF TABLES

Table 2-1. Air Quality Standards, Objectives, Limit and Target Values	
Table 3-1.         Impact Descriptors for Individual Receptors	16
Table 4-1.         Monitored Annual Mean NO2 Concentrations	17
Table 5-1.         Monitored Annual Mean NO2 Concentrations	19
Table 5-2.         Modelled Sensitive Receptors for Industrial Emission Assessment	20
Table 5-3. Orlan Super 130 kWth Biomass Boiler Stack Emissions	22
Table 5-5. Kalvis 0.95 MWth Biomass Boilers Stack Emissions and Stack Parameters	25
Table 5-6. Summary of Stack Discharge Conditions (Flue 1&2 Combined) (after WSP Report, January 2018)	27
Table 5-7. Locations and Heights of Building Used in the Model	30
Table 6-1. Maximum Long-Term (Annual Mean) Concentrations of NO2 – Scenario 1	33
Table 6-2. Long-Term (Annual Mean) Concentrations of NO2 and Impact Description of Effects at Receptors -	
Scenario 1	34
<i>Table 6-3.</i> Maximum Short-Term (1-Hour Mean, 99.79th Percentile) Concentrations of NO <sub>2</sub> – Scenario 1 <i>Table 6-4.</i> Maximum Short-Term (1-Hour Mean, 99.79th Percentile) Concentrations of NO <sub>2</sub> at Receptors	

Table 6-5 The Long-Term (Annual Mean) Concentrations of PM <sub>10</sub> and Significance of Effects at Key Receptors	s —
Scenario 1	
Table 6-6 The Short-Term (24-Hour Mean) Concentrations of PM <sub>10</sub> at Key Receptors – Scenario 1	. 42
Table 6-7 The Long-Term (Annual Mean) Concentrations of PM2.5 and Significance of Effects at Key Receptor	
Table 6-8. Summary of Predicted CO Concentrations	. 45
Table 6-9. Long-Term (Annual Mean) Concentrations of NO2 and Impact Description of Effects at Receptors -	
Scenario 2	. 47
Table 6-10. Maximum Short-Term (1-Hour Mean, 99.79th Percentile) Concentrations of NO2 at Receptors –	
Scenario 2	
Table 7-1. Summary of Cumulative Predicted NOx Concentrations for Protection of Vegetation and Ecosystem	
Scenario 1	
Table 7-2. Long-Term (Annual Mean) Concentrations of NO2 and Impact Description of Effects at Receptors -	
Scenario 1	
Table 7-3. Summary of Cumulative Predicted NOx Concentrations for Protection of Vegetation and Ecosystem	s –
Scenario 2	
Table 7-4. Long-Term (Annual Mean) Concentrations of NO2 and Impact Description of Effects at Receptors -	
Scenario 2	. 57
Table 8-1. Long-Term (Annual Mean) Concentrations of NO2 and Impact Description of Effects at Receptors -	
Cumulative Assessment	. 60
Table 8-2 Summary of the Predicted Short-Term NO2 Concentrations at Discrete Receptors – Cumulative	
Assessment	. 62
Table 8-3. The Long-Term (Annual Mean) Concentrations of PM10 and Impact Description of Effects at Recept	
- Cumulative Assessment	. 67
Table 8-4 The Short-Term (24-Hour Mean) Concentrations of PM10 at Key Receptors - Cumulative Assessment	nt
	. 69
Table 8-5. The Long-Term (Annual Mean) Concentrations of PM2.5 and Impact Description of Effects at Recept	tors
- Cumulative Assessment	. 72
Table 8-6. Summary of Predicted CO Concentrations – Cumulative Assessment	. 73
Table 8-7. Summary of the Predicted Short-Term NO2 Concentrations at Discrete Receptors including the wait	ting
Traffic	. 77
Table 9-1 H4 Benchmark Odour Criteria	
Table 9-2 Proposed odour effect descriptors for impacts predicted by modelling "Most Offensive "odours	. 81
Table 9-3 Proposed odour effect descriptors for impacts predicted by modelling "Moderately Offensive" odour	irs
	. 82
Table 9-4 Odour Emissions from Drying Floor for the Assessment and Stack Parameters	. 83
Table 9-5. Orlan Super 130 kWth Biomass Boiler Stack Odour Emissions and Stack Parameters	. 84
Table 9-6. Modelled Sensitive Receptors for Odour Assessment	
Table 9-7. The 98th %ile Maximum Short-Term (Hourly) Concentrations of Odour	
Table 9-8. Modelled Sensitive Receptors for Odour Assessment	. 88
Table 9-9. Sensitivity Analysis	. 90
Table 10-1 Complaints by Months and Years	. 91
Table A 11-1. Traffic Data	. 95
Table A 11-2. ADMS Roads Model Inputs.	. 96
Table A 11-3. Modelled Existing Sensitive Receptor Locations	
Table A 11-4. Comparison of Roadside Modelling & Monitoring Results for NO2	. 97
Table A 11-5. Predicted 2018 Annual Average Concentrations of NO2	. 98

## **LIST OF FIGURES**

Figure 1-1. Site location
<i>Figure 5-5</i> Buildings for the Modeling       31 <i>Figure 6-1.</i> Predicted Ground level Long-Term NO <sub>2</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 1       37 <i>Figure 6-2.</i> Predicted Ground Level Short-Term NO <sub>2</sub> Concentrations (PC, 1-Hour Mean, 99.79 <sup>th</sup> Percentile) from the Operation of Eco-Power Boilers (2018 Met Data) – Scenario 1       38 <i>Figure 6-3.</i> Predicted Ground level Long-Term NO <sub>x</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 1       38 <i>Figure 6-4.</i> Predicted Ground level Short-Term NO <sub>x</sub> Concentrations (PC) from the Operation of Eco-Power       39 <i>Figure 6-4.</i> Predicted Ground level Short-Term NO <sub>x</sub> Concentrations (PC) from the Operation of Eco-Power       39
<i>Figure 6-4.</i> Predicted Ground level Short-Term NO <sub>x</sub> Concentrations (PC) from the Operation of Eco-Power         Boilers (2018 Met Data) – Scenario 1       40         Figure 6-5       Predicted Long-Term PM <sub>10</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 1         Mathematication       43 <i>Figure 6-6.</i> Predicted Ground level Long-Term NO <sub>2</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 2         (2017 Met Data) – Scenario 2       50 <i>Figure 6-7.</i> Predicted Ground Level Short-Term NO <sub>2</sub> Concentrations (PC, 1-Hour Mean, 99.79 <sup>th</sup> Percentile) from the Operation of Eco-Power Boilers (2018 Met Data) – Scenario 2         (2017 Met Data) – Scenario 2       51 <i>Figure 6-8.</i> Predicted Ground level Long-Term NO <sub>x</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 2         (2017 Met Data) – Scenario 2       51 <i>Figure 6-9.</i> Predicted Ground level Short-Term (24 hr) NO <sub>x</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2018 Met Data) – Scenario 2       52 <i>Figure 8-1</i> Predicted Long-Term NO <sub>2</sub> Concentrations (PC) from the Cumulative Assessment – Including       53         Figure 8-2 Predicted Short-Term NO <sub>2</sub> Concentrations (PC) from the Cumulative Iso form the Cumulative       63
Assessment – Including Emissions from Eco-Power Boilers, Transwaste Kalvis Boilers and ERF (2018 Met Data) <i>Figure 8-3.</i> Predicted Ground level Long-Term NO <sub>x</sub> Concentrations (PC) for the Cumulative Assessment – Including Emissions from Eco-Power Boilers, Transwaste Kalvis Boilers and ERF (2017 Met Data)

## **APPENDICES**

APPENDIX A	BASELINE TRAFFIC AIR QUALITY MODELLING	95
APPENDIX B	EA SCHEDULE 5 LETTER	. 100

APPENDIX C	ODOUR COMPLAINT RECORDS	106
APPENDIX D	REPORT TERMS & CONDITIONS	182

## **ACRONYMS/ABBREVIATIONS**

Acronyms/Abbreviations	Definition
AADT	Annual Average Daily Traffic
ADMS	An advanced distribution management system
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AQAL	the Air Quality Assessment Level
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objectives
AQS	Air Quality Standards
CHP	Combined Heat and Power
CL	Critical Level
CO	Carbon Monoxide
DEFRA	Department for Environment Food & Rural Affairs
EAL	Environmental Assessment Limits
EC	European Commission
EFT	The Emissions Factors Toolkit
EPUK	Environmental Protection UK
EU	European Union
EPAQS	The Expert Panel on Air Quality Standards
IAQM	The Institute of Air Quality Management
ISC3	The Industrial Source Complex
LA	Environmental Assessment Limits
LAQM	Local Air Quality Management
NGR	The United Kingdom National Grid Reference
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
PC	Process Contribution
MHCLG	the Ministry for Housing, Communities and Local Government
NPPF	The National Planning Policy Framework
OS	the UK Ordnance Survey
PEC	Predicted Environment Concentration
PPG	Planning Policy Guidance
PPS	Planning Policy Statements
SAC	Special Areas of Conservation

Acronyms/Abbreviations	Definition
SPA	Special Protection Area
SSSI	Sites of Special Scientific Interest
VOC	Volatile organic compounds
WHO	World Health Organization
UK	The United Kingdom

## **EXECUTIVE SUMMARY**

Eco-Power Environmental Limited commissioned Tetra Tech (formerly WYG) to update an air quality assessment to meet the EA's schedule 5 request of "Notice of request for more information". The air quality assessment assessed the impact from 41 proposed Orlan Super 130 kW Biomass boilers at Waste Drying Plant, at Gibson Lane, Melton, Hull, HU14 3HH.

#### Eco-Power's Biomass Boiler Emission Impact Assessment

The predicted long-term and short-term NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO, concentrations from the emissions of the operation of the proposed Orlan Super 130 kW Biomass boilers are all below the relevant AQOs for the protection of human health.

The significance of effects on the emissions on the ground level receptors from the boiler operations with respect to long-term NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> is determined to be 'negligible'.

#### Habitat Assessment

The annual mean and daily (24 hour mean) NO<sub>x</sub> PEC at the ecological receptors from Eco-Power's boiler operations are below the relevant critical level for the protection of vegetation and Ecosystems. the NO<sub>x</sub> impacts from the proposed development on the ecological receptors are insignificant.

The process contribution (PC, as predicted by the detailed dispersion model) from Eco-Power biomass boiler operations is <1% of the relevant critical level or load (CL) and it can be considered inconsequential. It does not need to be included in an in-combination (cumulative) habitat assessment.

#### Cumulative Impact Assessment for the Protection of Human Health

Cumulative impact assessment for the protection of human health has been undertaken including the emission sources adjacent to Eco-Power biomass boilers and the emission sources in the cumulative assessment include:

- (1) 41 Orlan Super 130 kWth biomass boilers proposed by Eco-Powers;
- (2) Three Kalvis 0.95 MWth biomass boilers operated by Transwaste Ltd; and
- (3) Two emission flues at Energy Recovery Facility (ERF) operated by HRS Energy.

The predicted cumulative long-term and short-term NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO, concentrations from the cumulative emission source considered are all below the relevant AQOs for the protection of human health.

The significance of cumulative effects on the emissions on the ground level receptors from the emission source considered with respect to long-term NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> is determined to be 'negligible'.

#### Odour Impact Assessment from Biomass Boilers and Drying Floor Operations

The odour emissions from the biomass boilers and a Perry Belt Drier (drying floor) operations were assessed and the maximum predicted odour concentration at sensitive/residential receptors is below the odour benchmark. The odour effects from the site operations on the sensitive receptors are insignificant.

The proposed development is not considered to be contrary to any of the national and local planning policies.

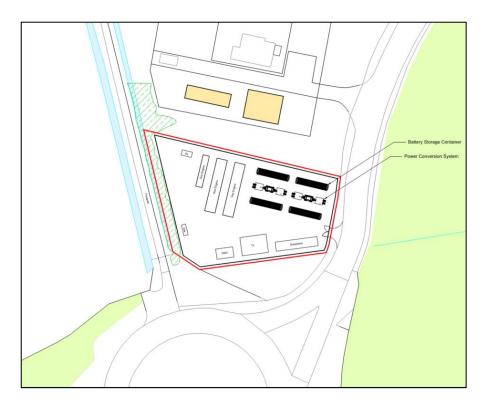
## **1.0 INTRODUCTION**

Eco-Power Environmental Limited commissioned Tetra Tech (formerly WYG) to undertake an air quality assessment to support a planning application of the installation of 41 proposed Orlan Super 130 kW Biomass boilers Biomass Boilers at Waste Drying Plant, at Gibson Lane, Melton, Hull, HU14 3HH.

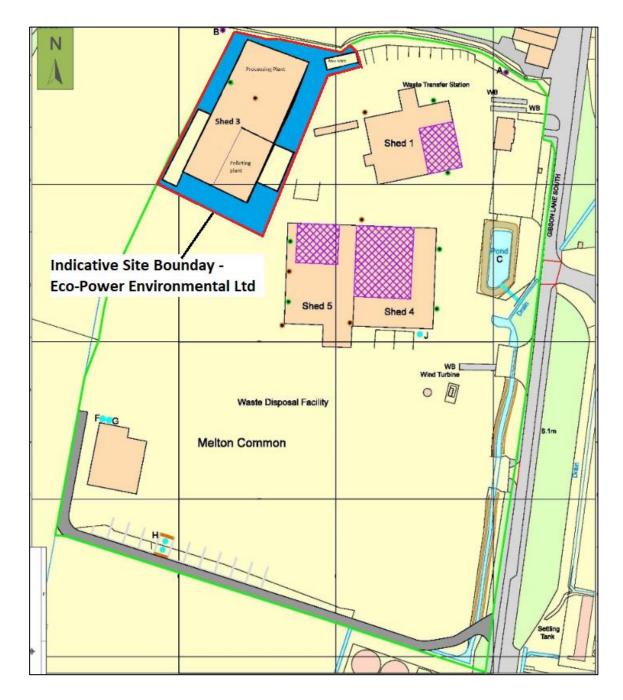
## **1.1 SITE LOCATION AND CONTEXT**

The United Kingdom National Grid Reference (NGR) of the site is approximately 496730, 425530. The site is bounded by farmland to the west and industrial/commercial uses to the north, east and south. Reference should be made to *Figure 1-1* for a map of the proposed development site and surrounding area and the indicative site boundary is shown in *Figure 1-2*. The site layout is presented in *Figure 1-3*.

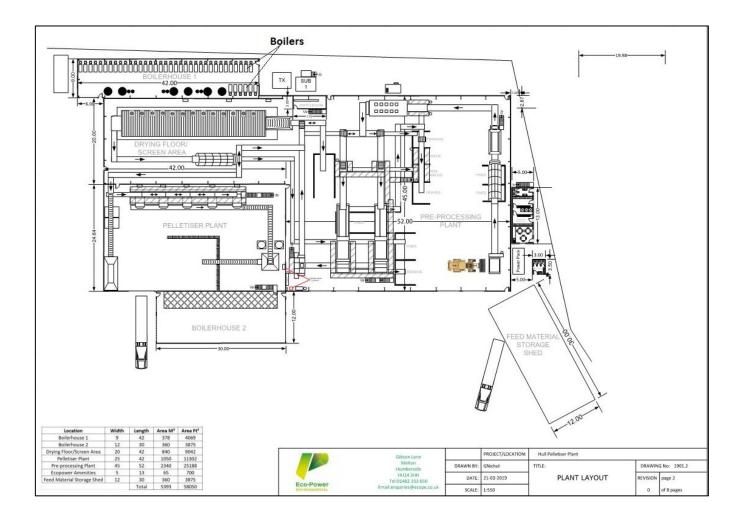
Figure 1-1. Site location



### Figure 1-2. Indicative Site Boundary



#### Figure 1-3 Site Layout



The following stages have been undertaken as part of this assessment:

- Baseline evaluation;
- Identification of receptors, including ecological receptors;
- Baseline traffic air quality modelling to determine NO2 pollutant levels to consider emissions from traffic;
- Assessment of potential air quality impacts from the operation of biomass boilers at Eco-Power plant;
- Cumulative impact assessment from adjacent industrial points sources, including Transwaste's biomass boilers and Energy Recovery Facility;
- Assessment of impact on the ecological receptors using 'IAQM's guide to the assessment of air quality impacts on designated nature conservation sites'; and,
- Odour assessment from the biomass boilers and drying floor operations.

The objective of the air quality assessment is to determine whether the impacts from engine emissions meet the required air quality standards (AQSs), AQOs, or air quality environmental assessment limits (EALs) for the protection of human health and for the protection of vegetation and ecosystems.

## **1.2 REPORT REVISION HISTORY**

## **1.2.1 The First, Second and Third Issues of the Report**

Tetra Tech has produced three versions of the air quality assessment and odour assessment report: the first issue dated on the 22<sup>nd</sup> November 2019, report reference A115848.

The second issue date on the 24<sup>th</sup> January 2020, report reference A115848.The second issue of the air quality assessment report includes an odour assessment from the drying floor operations and Tetra Tech's (WYG's) responses to the comments from Mr Philip Hill, Senior Environmental Control Officer of Yorkshire Council. Mr Hill contacted WYG with regards to the potential increased short-term impact from the waiting traffic at the level crossing at Gibson Lane on residential receptors.

The third issues of the reports are produced with minor amendment on the 14th February 2020.

## **1.2.2 This Report Update**

After reviewing the third issue of the report, Mr Matthew Woollin, Environmental Officer, Permitting and Support Centre, Quadrant 2, 99 Parkway Avenue, Parkway Business Park, Sheffield S9 4WF, issued a letter on the 22<sup>nd</sup> January 2011, requires to provide the information detailed in the attached schedule. The information is required in order to determine the application for a permit duly made on 21st October 2020 (Application number: EPR/MP3107PP/A001). The Schedule 5 letter requests the addition information on both odour modelling assessment and odour management plan (OMP). The details of the copy of the letter are presented in Appendix B.

This air quality assessment and odour assessment report has been revised to meet the EA's Schedule 5 requirement with regard to "Odour management plan (OMP)/Environmental Permitting Technical Requirements (odour only)". The EA's requests are presented in *italic* and the Tetra Tech's responses are in **blue** below.

16. Add North Ferriby to the list of sensitive receptors.

#### Tetra Tech (Tt) Response (16):

Receptors of at locations of 25 the triangle, North Ferriby (D6), 79 Plantation Drive (D10) and 75 Southfield Drive (D11) are the North Ferriby receptors. Five additional receptors (D12 to D16) have been added at North Ferriby area for the assessment.

17. Explain the reasoning behind the assumption made about the odour emission value for emissions from the drying process used in modelling impact.

#### Tetra Tech (Tt) Response (17):

The odour emission value from the drying process used in the modeling impact is  $212 \text{ OU}_{\text{E}}/\text{m}^3$ , which is equivalent to the odour outlet concentrations for biofilters treating biowaste odour (sniffer report: Understanding biofilter performance and determining emission concentration under operation conditions, Final Report – project Number ER36, June 2014).

A higher odour emission value of 500  $OU_E/m^3$  (which is more than double of the 212  $OU_E/m^3$ ) has been used in the assessment.

18. Modelling should be re-run with a higher odour emission value.

#### Tetra Tech (Tt) Response (18):

A higher odour emission value of 500  $OU_E/m^3$  (more than double of the 212  $OU_E/m^3$ ) for the drying floor operations has been used in the assessment.

19. Re-run the model to account for reduced benchmark due to a sensitised population.

#### Tetra Tech (Tt) Response (19):

H4 guidance has set up the odour benchmark criteria based on the offensiveness of the odour. As the waste drying plant will be drying the waste such as, waste wood, paper and plastic, but not having any food waste and household waste, the potential odour can be classified as "moderately offensive odours". The benchmark odour criterion of 3.0 OUe/m<sup>3</sup> for moderately offensive odours are considered to be appropriate

for this assessment. In addition, a "high" receptor sensitivity, for example, residential dwellings, has been used in the assessment.

20. Consider alternate odour monitoring location points, especially in the North Ferriby area.

#### Tetra Tech (Tt) Response (20):

Alternate odour monitoring location points have been presented in the revised Odour Management Plan (OMP). The revised OMP, which is based on the Eco-Power Environmental OMP dated March 2020, Ref: Eco 09.03.2020/OMP, will be presented in a stand-alone document.

21. Confirm the location and purposes of the monitoring locations on figure 2 of the OMP that appear to be within or on top of the building.

#### Tetra Tech (Tt) Response (21):

The odour monitoring location points have been presented in the revised Odour Management Plan (OMP). The revised OMP, which is based on the Eco-Power Environmental OMP dated March 2020, Ref: Eco 09.03.2020/OMP, will be presented in a stand-alone document.

22. The OMP needs to consider the risk of odour generated by the operation of the wood fuelled boilers.

#### Tetra Tech (Tt) Response (22):

Odour emissions from the operation of the wood fuelled boilers has been assessed and the results have been included in Chapter 9 of this assessment update. The operational measures to reduce the odour emissions from the boilers have been presented in the revised Odour Management Plan (OMP).

23. Revise the OMP review triggers to account for information provided by complaint investigation and actual impact of the proposed activity (especially use of wood fuelled boilers and drying line).

#### Tetra Tech (Tt) Response (23):

The last five year's odour complaint occurred within 2 km of the site have been obtained from the Environment Agency. Each of the recorded odour complaint from the 19<sup>th</sup> February 2016 to the 17<sup>th</sup> January 2021 has been investigated according to the time of complaint, the distance to the site, wind direction, weather conditions, characteristic of the smell, and intensity of the odour.

The investigations indicated that the odour complaints are most likely coming from neighboring operations at Transwaste facility. The detailed odour complaint analyses results are presented in Chapter 10 of this report.

Odour triggers for the operations of wood fuelled boilers and drying line have been presented in the revised Odour Management Plan (OMP).

24. Provide detail as to how public engagement will be initiated and encouraged.

#### Tetra Tech (Tt) Response (24):

The public engagement has been discussed and presented in the revised Odour Management Plan (OMP).

25. Provide indicative examples for how odour from the boilers or drying could be reduced if determined to be the source of odour.

#### Tetra Tech (Tt) Response (25):

The examples for how odour from the boilers or drying could be reduced if determined to be the source of odour have been discussed and presented in the revised Odour Management Plan (OMP).

26. Define what represents a substantiated complaint.

#### Tetra Tech (Tt) Response (26):

The definition of a substantiated complaint and the odour complaint investigation procedures have been discussed and presented in the revised Odour Management Plan (OMP).

27. This application seeks to add a drying activity using wood fuelled appliances to provide heat. Please revise your best available techniques assessment (BAT assessment) to ensure that all the necessary procedures and operating techniques are updated to include the wood fuelled appliances and drying activity of the SRF. Please ensure that it addresses all the requirements of the Waste Treatment BAT conclusions1. Namely; please revise BAT 10, 12 and 13 to ensure you have adequate monitoring and management of odours on the site with regards to emissions from the wood fuelled appliances and the drying of SRF.

#### Tetra Tech (Tt) Response (26):

All the necessary procedures and operating techniques are updated to include the wood fuelled appliances and drying activity of the SRF have been discussed and presented in the revised Odour Management Plan (OMP). The revised OMP includes details of the BAT 10, 12, 13 to ensure that there is adequate monitoring and management of odours on the site with regards to emissions from the wood fuelled appliances and the drying of SRF.

BAT 10; monitoring of odour in cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

BAT 12; OMP to contain - an odour prevention and reduction program designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures.

BAT 13; In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given.

## 2.0 POLICY AND LEGISLATIVE CONTEXT

The following assessment has been undertaken in accordance with the legislation and best practice guidance as stated below.

## 2.1 DOCUMENTS CONSULTED

The following documents were consulted during the undertaking of this assessment:

Legislation and Best Practice Guidance

- National Planning Policy Framework, Ministry for Housing, Communities and Local Government, Revised February 2019;
- Planning Practice Guidance: Air Quality, Ministry for Housing, Communities and Local Government, November 2019;
- The Air Quality Standards Regulations (Amendments), 2016,
- The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Defra, 2007;
- The Environment Act, 1995;
- Local Air Quality Management Technical Guidance LAQM.TG16, Defra, 2018;
- Design Manual for Roads and Bridges, Volume 11, Section 3, Part 1, LA 105 Air quality, Highways England, November 2019
- Land-Use Planning & Development Control: Planning for Air Quality, EPUK & IAQM, 2017;
- Guidance on the Assessment of Dust from Demolition and Construction, IAQM, 2014;
- Local Air Quality Management Note on Projecting NO<sub>2</sub> concentrations, DEFRA, April 2012; and
- A Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites (Version 1.0), IAQM, June 2019.

#### Websites Consulted

- Google maps (maps.google.co.uk);
- The UK National Air Quality Archive (www.airquality.co.uk);
- Department for Transport Matrix (www.dft.go.uk/matrix);
- emapsite.com;
- Multi-Agency Geographic Information for the Countryside (http://magic.defra.gov.uk/);
- Planning Practice Guidance (http://planningguidance.planningportal.gov.uk/); and

#### Air Quality Assessment

• East Riding Council website http://www.eastriding.gov.uk.

Site Specific Reference Documents

- East Riding Local Plan (2012-2029) (Adopted April 2016).
- 2018 Air Quality annual status Report (ASRR), East Riding of Yorkshire Council, June 2018.

## 2.2 AIR QUALITY LEGISLATIVE FRAMEWORK

#### **European Legislation**

European air quality legislation is consolidated under Directive 2008/50/EC, which came into force on 11<sup>th</sup> June 2008. This Directive consolidates previous legislation which was designed to deal with specific pollutants in a consistent manner and provides new air quality objectives for fine particulates. The consolidated Directives include:

- Directive 1999/30/EC the First Air Quality "Daughter" Directive sets ambient air limit values for NO2 and oxides of nitrogen, sulphur dioxide, lead and PM10;
- Directive 2000/69/EC the Second Air Quality "Daughter" Directive sets ambient air limit values for benzene and carbon monoxide; and,
- Directive 2002/3/EC the Third Air Quality "Daughter" Directive seeks to establish long-term objectives, target values, an alert threshold and an information threshold for concentrations of ozone in ambient air.

The fourth daughter Directive was not included within the consolidation and is described as:

 Directive 2004/107/EC – sets health-based limits on polycyclic aromatic hydrocarbons, cadmium, arsenic, nickel and mercury, for which there is a requirement to reduce exposure to as low as reasonably achievable.

#### **UK Legislation**

<u>The Air Quality Standards Regulations</u> (Amendments 2016) seek to simplify air quality regulation and provide a new transposition of the Air Quality Framework Directive, First, Second and Third Daughter Directives and also transpose the Fourth Daughter Directive within the UK. The Air Quality Limit Values are transposed into the updated Regulations as Air Quality Standards, with attainment dates in line with the European Directives. SI 2010 No. 1001, Part 7 Regulation 31 extends powers, under Section 85(5) of the <u>Environment Act</u> (1995), for the Secretary of State to give directions to Environmental Assessment Limits (LAs) for the implementation of these Directives.

The UK Air Quality Strategy is the method for implementation of the air quality limit values in England, Scotland, Wales and Northern Ireland and provides a framework for improving air quality and protecting human health from the effects of pollution.

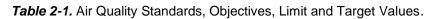
For each nominated pollutant, the Air Quality Strategy sets clear, measurable, outdoor air quality standards and target dates by which these must be achieved; the combined standard and target date is referred to as the Air

#### Air Quality Assessment

Quality Objective (AQO) for that pollutant. Adopted national standards are based on the recommendations of the Expert Panel on Air Quality Standards (EPAQS) and have been translated into a set of Statutory Objectives within the <u>Air Quality (England) Regulations</u> (2000) SI 928, and subsequent amendments.

The AQOs for pollutants included within the Air Quality Strategy and assessed as part of the scope of this report are presented in *Table 2-1* along with European Commission (EC) Directive Limits and World Health Organisation (WHO) Guidelines.

Pollutant	Applies	Objectives	Concentration Measured as	Date to be achieved and maintained thereafter	European Obligations	Date to be achieved and maintained thereafter	New or existing
NO <sub>2</sub>	UK	200µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-Hour Mean	31 <sup>st</sup> December 2005	200µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1 <sup>st</sup> January 2010	Retain Existing
	UK	40µg/m³	Annual Mean	31 <sup>st</sup> December 2005	40µg/m <sup>3</sup>	1 <sup>st</sup> January 2010	
со	UK	10mg/m <sup>3</sup>	Maximum daily 8 Hour Mean	31 <sup>st</sup> December 2004	10mg/m <sup>3</sup> Maximum daily 8 hour mean	1 <sup>st</sup> January 2005	Retain Existing



Within the context of this assessment, the annual mean objectives are those against which facades of residential receptors will be assessed and the short-term objectives apply to all other receptor locations, where people may be exposed over a short duration, both residential and non-residential such as using gardens, balconies, walking along streets, using playgrounds, footpaths or external areas of employment uses.

#### Local Air Quality Management

Under Section 82 of the Environment Act (1995) (Part IV) Local Authorities (LAs) are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves assessing present and likely future air quality against the AQOs. If it is predicted that levels at the façade of buildings where members of the public are regularly present (normally residential properties) are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA, the LA is required to produce an Air Quality Action Plan (AQAP), the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

## 2.3 PLANNING AND POLICY GUIDANCE

#### **National Policy**

The National Planning Policy Framework (NPPF), revised February 2019, principally brings together and summarises the suite of Planning Policy Statements (PPS) and Planning Policy Guidance (PPG) which previously guided planning policy making. The NPPF states that:

'Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas or Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic or travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.'

The Planning Practice Guidance (PPG) web-based resource was launched by the Ministry for Housing, Communities and Local Government (MHCLG) on 6 March 2014 to support the National Planning Policy Framework and make it more accessible. A review of PPG: Air Quality identified the following guidance:

*When deciding whether air quality is relevant to a planning application, local planning authorities should consider whether the development would:* 

Significantly affect traffic in the immediate vicinity of the proposed development site or further afield. This could be by generating or increasing traffic congestion; significantly changing traffic volumes, vehicle speed or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; adds to turnover in a large car park; or result in construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more.

Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; or extraction systems (including chimneys) which require approval under pollution control legislation or biomass boilers or biomass-fuelled CHP plant; centralised boilers or CHP plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a Smoke Control Area.

Expose people to existing sources of air pollutants. This could be by building new homes, workplaces or other development in places with poor air quality.

Give rise to potentially significant impact (such as dust) during construction for nearby sensitive locations.

Affect biodiversity. In particular, is it likely to result in deposition or concentration of pollutants that significantly affect a European-designated wildlife site and is not directly connected with or necessary to the management of the site, or does it otherwise affect biodiversity, particularly designated wildlife sites.'

#### Local Policy

The East Riding Local Plan 2012 – 2029, Adopted April 2016, comprises a number of different documents with policies to address key planning issues, as well policies that allocate land for specific uses.

The East Riding Local Plan has been reviewed and the following policy was deemed relevant:

#### Policy EC5: Supporting the energy sector

A. Proposals for the development of the energy sector, excluding wind energy, will be supported where any significant adverse impacts are addressed satisfactorily, and the residual harm is outweighed by the wider benefits of the proposal. Developments and their associated infrastructure should be acceptable in terms of:

1. The cumulative impact of the proposal with other existing and proposed energy sector developments;

2. The character and sensitivity of landscapes to accommodate energy development, with particular consideration to the identified Important Landscape Areas,

3. The effects of development on:

*i.* local amenity, including noise, air and water quality, traffic, vibration, dust and visual impact.

## 3.0 ASSESSMENT METHODOLOGY

The potential environmental effects of the operational phase of the proposed development are identified as far as current knowledge of the site and development allows. The significance of potential environmental effects is assessed according to the latest guidance produced by EPUK and IAQM in January 2017.

## 3.1 DETERMINING THE IMPACT MAGNITUDE OF THE AIR QUALITY EFFECTS

The impact magnitude of the effects during the operational phase of the development is based on the latest guidance produced by EPUK and IAQM in January 2017. The guidance provides a basis for a consistent approach that could be used by all parties associated with the planning process to professionally judge the overall significance of the air quality effects based on severity of air quality impacts.

The following rationale is used in determining the severity of the air quality effects at individual receptors:

- The change in concentration of air pollutants, air quality effects, are quantified and evaluated in the context of AQOs. The impacts are provided as a percentage of the Air Quality Assessment Level (AQAL), which may be an AQO, EU limit or target value, or a Natural Resources Wales Assessment Level (NRWAL)';
- The absolute concentrations are also considered in terms of the AQAL and are divided into categories for long term concentration. The categories are based on the sensitivity of the individual receptor in terms of harm potential. The degree of harm potential to change increases as absolute concentrations are close to or above the AQAL;
- 3. Severity of the effect is described as qualitative descriptors; negligible, slight, moderate or substantial, by taking into account in combination the harm potential and air quality effect. This means that a small increase at a receptor which is already close to or above the AQAL will have higher severity compared to a relatively large change at a receptor which is significantly below the AQAL;
- 4. The impacts can be adverse when pollutant concentrations increase or beneficial when concentration decrease as a result of development;
- 5. The judgement of overall significance of the effects is then based on severity of effects on all the individual receptors considered; and,
- 6. Where a development is not resulting in any change in emissions itself, the significance of effect is based on the effect of surrounding sources on new residents or users of the development, i.e., will they be exposed to levels above the AQAL.

Long term average	% Change in concentration relative to AQAL					
concentration at receptor in assessment year	1	2-5	6-10	>10		
≤75% of AQAL	Negligible	Negligible	Slight	Moderate		
76-94% of AQAL	Negligible	Slight	Moderate	Moderate		
95-102% of AQAL	Slight	Moderate	Moderate	Substantial		
103-109 of AQAL	Moderate	Moderate	Substantial	Substantial		
≥110 of AQAL	Moderate	Substantial	Substantial	Substantial		

#### Table 3-1. Impact Descriptors for Individual Receptors

In accordance with explanation note 2 of Table 6.3 of the EPUK & IAQM guidance, the Table is intended to be used by rounding the change in percentage pollutant concentration to whole numbers, which then makes it clearer which cell the impact falls within. The user is encouraged to treat the numbers with recognition of their likely accuracy and not assume a false level of precision. Changes of 0%, i.e. less than 0.5%, will be described as Negligible.

## **4.0 BASELINE CONDITIONS**

## **4.1 AIR QUALITY REVIEW**

This section provides a review of the existing air quality in the vicinity of the proposed development site in order to provide a benchmark against which to assess potential air quality impacts of the proposed development. Baseline air quality in the vicinity of the proposed development site has been defined from a number of sources, as described in the following sections.

#### Local Air Quality Management (LAQM)

As required under section 82 of the Environment Act 1995, East Riding of Yorkshire Council (ERYC) has conducted an ongoing exercise to review and assess air quality within its area of jurisdiction.

East Riding of Yorkshire currently does not have any Air Quality Management Areas (AQMAs).

#### Air Quality Monitoring

Monitoring of air quality within the ERYC is conducted through non-continuous monitoring methods. These have been reviewed in order to provide an indication of existing air quality in the area surrounding the proposed development site.

#### Continuous Monitoring

East Riding of Yorkshire did not carry out any automatic (continuous) monitoring for any pollutions in 2017.

#### Non - Continuous Monitoring

ERYC operates a network of 77 passive diffusion tubes. The most recent monitoring data have recorded NO<sub>2</sub> concentrations within ERYC in 2017. The closest diffusion tube is located next to A63 approximately 900m north from the proposed site boundary.

The representative diffusion tube data within the site area are from 2017 which is presented in *Table 4-1*Error! Reference source not found.

Table 4-1. Monit	tored Annual Mea	n NO <sub>2</sub> Concentrations

Site ID	Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	Distance to Kerb of Nearest Road (m)	NO₂ Annual Mean Concentration (µg/m³) 2018
1	Gibson Lane North (footbridge), Melton	Roadside	497094	426482	29	29
28	A63/Gibson Lane North, Welton	Roadside	497107	426463	4.3	52
35	A63 East (The Old Foundry), Welton	Roadside	495736	427033	10	50
45	A63 West (Pool Bank Farm), Welton	Roadside	495833	426926	9	35

#### Air Quality Assessment

72	A63 West (Melton Grange), Melton	Roadside	497332	426384	4	36
----	-------------------------------------	----------	--------	--------	---	----

As indicated in Table above, the roadside diffusion tubes (28 and 35) next to A63 were above the relevant AQO (40  $\mu$ g/m<sup>3</sup> annual mean) in 2017.

ERYC LAQM Annual Status Report 2018 states that:

"Tubes No.28 & No.35 were highlighted in the ASR 2017 and are located adjacent to the A63, the main connecting route from the M62 towards Hull (see Fig's 4 and 5). This eastern extremity of the M62/A63 corridor can experience significant levels of congestion, particularly during peak hours as it carries a high volume of not only cars but also HGV's serving businesses and the nearby ports of Hull and Goole.

As previously reported in the ASR 2017, tube No.28 recorded a decrease in annual mean NO<sub>2</sub> concentration of 13% (61µg/m<sup>3</sup> to 53µg/m<sup>3</sup>) between 2013 and 2014, followed by a further 4% decrease between 2014 and 2015, from 53µg/m<sup>3</sup> to 49µg/m<sup>3</sup>. In 2016, this tube again shows a significant decrease of 6% from 49µg/m<sup>3</sup> to 46µgm<sup>3</sup> However between 2016 and 2017 there has been a 13% increase from 46µgm<sup>3</sup> to 52µgm<sup>3</sup>. The reasons for such an increase aren't immediately apparent, but it is likely down to a combination of meteorological conditions and traffic volumes.

Tube No.35 returned an annual mean of 48µg/m<sup>3</sup> in 2015 and 2016. In 2017 this has increased by 4% to 50µg/m<sup>3</sup>.

When subjected to the Defra "NO<sub>2</sub> fall-off with distance calculator", the predicted annual mean NO<sub>2</sub> concentrations at the nearest relevant receptor locations for tubes No.28 and No.35 are both within the  $40\mu g/m^3$  objective, at 33.5  $\mu g/m^3$  and 38.7  $\mu g/m^3$  respectively."

The monitoring data from the diffusion tubes Table 4.1 have been used in the traffic emission modelling to determine baseline pollutant levels for the assessment.

## 4.2 BASELINE/BACKGROUND CONCENTRATIONS INCLUSIVE OF CONTRIBUTINS FROM TRAFFIC EMISSIONS

ADMS Roads has been used to undertake a verified baseline modelling to determine baseline pollutant levels at the selected receptor locations by considering emissions from traffic. Details of the background concentrations used in this assessment are provided in Appendix A.

## 5.0 DETAILED DISPERSION MODELLING METHODOLOGY

In order to consider the air quality impacts of the engines on the local air quality, a quantitative assessment using the third generation Breeze AERMOD dispersion model has been undertaken. AERMOD is a development from the ISC3 dispersion model and incorporates improved dispersion algorithms and pre-processors to integrate the impact of meteorology and topography within the modelling output.

The model uses hourly meteorological data to define conditions for plume rise, transport, diffusion and deposition. It estimates the concentration for each source and receptor combination for each hour of input meteorology and calculates user-selected short-term averages.

## 5.1 MODELLING PARAMETER AND AVERAGING PERIOD

The dispersion modelling has assessed cumulative impact of emissions from the engine taking into consideration of the proposed installation.

The same averaging period should be used for comparison of emissions against environmental standards. For example, most long-term standards are expressed as an annual mean and many short-term standards as an hourly mean. Note that there are certain exceptions to this which are important when considering compliance with statutory EQS. The averaging period associated with the relevant modelled pollution are detailed in *Table 5-1*.

Devenue ( au	Modelled As			
Parameter	Short Term	Long Term		
NO <sub>2</sub>	99.79 <sup>th</sup> percentile (%ile) 1-hour mean	Annual Mean		
PM <sub>10</sub>	90.41 <sup>th</sup> percentile (%ile) 24-hour mean	Annual Mean		
PM <sub>2.5</sub>	-	Annual Mean		
СО	8-hour running mean	-		

NO<sub>2</sub> background concentrations are taken from ADMS Road modelling results, which includes the contribution from the traffic emissions.

For short term averaging periods, the following UK Defra methodology, for example, has been followed:

For 1-hour NO<sub>2</sub> concentrations:

• 99.79th percentile(%ile) 1-hour Process Contribution NO2 + 2 x (annual mean background contribution NO2).

## **5.2 SENSITIVIE RECEPTORS**

#### **Discrete (Individual) Receptors**

The discrete sensitive receptors identified for the purposes of this air quality assessment are contained in *Table 5-2* and shown further in *Figure 5-1*. The assessment has also been undertaken to determine the potential impacts at those selected receptors.

It should be noted that these do not represent an exhaustive list of all receptors within the vicinity of the Site, rather they are worst case representative locations within and adjacent to the site.

0% 15		UK NGR (m)		
Site ID	Discrete Sensitive Receptor	X	Y	
D1	100 Gibson Lane South	496955	425795	
D2	88 Gibson Lane South	496966	425882	
D3	54 Gibson Lane	497015	426249	
D4	The Coach House, Melton Grange, Main Road	497209	426365	
D5	21 Brickyard Lane	497442	426144	
D6	25 the triangle, North Ferriby	498166	425622	
D7	Lowcroft Farm, Lowfield Lane	496343	426287	
D8	South Hunsley School, 41 East Dale Road	496689	426616	
D9	62 Common Lane	495613	426302	
D10	79 Plantation Drive	497983	426212	
D11	75 Southfield Drive	498268	425278	
D12	87 Riverview Avenue	498219	425426	
D13	29 Marine Avenue	498340	425491	
D14	12 Plantation Drive	498106	425838	
D15	66 Plantation Drive	498019	426081	
D16	10 Ashdale Park	498243	426085	
E1	Humber Estuary SPA, SAC, Ramsar, SSSI 1	495737	424661	
E2	Humber Estuary SPA, SAC, Ramsar, SSSI 2	496260	424641	
E3	Humber Estuary SPA, SAC, Ramsar, SSSI 3	496719	424633	
E4	Humber Estuary SPA, SAC, Ramsar, SSSI 4	497218	424746	
E5	Humber Estuary SPA, SAC, Ramsar, SSSI 5	498147	425020	

#### Table 5-2. Modelled Sensitive Receptors for Industrial Emission Assessment

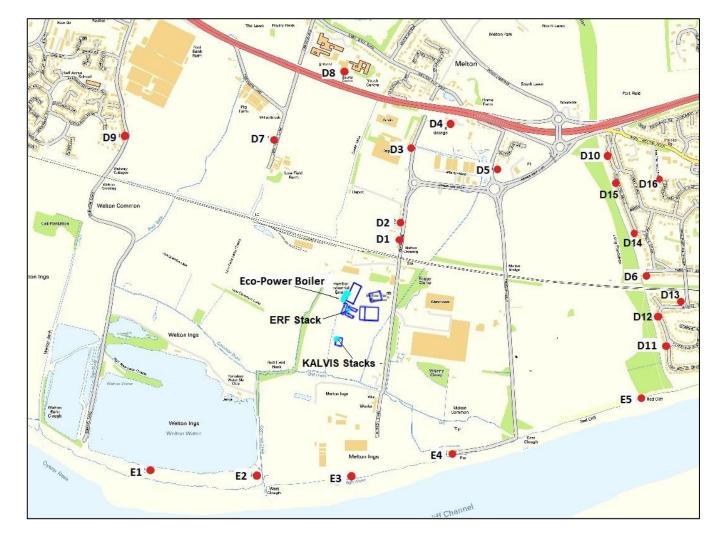


Figure 5-1. Receptor, Buildings and Modelled Emission Locations

#### **Cartesian Grid Receptor**

Cartesian receptor grid was used in the model in order to produce the concentration contour lines. The Cartesian receptor grid consists of receptors identified by their x (east-west) and y (north-south) coordinates. A grid was constructed with grid spacing (x, y) of 50m x 50m over an area covering 4000m by 4000m with south-west corner UK NGR (m) of 495100,423600.

#### **Ecological Receptors for Industrial Emission Assessment**

The guidance 'Air emissions risk assessment for your environmental permit' (Defra and Environment Agency, 2 August 2016) states that assessments should consider the impact on the conservation areas by:

Examining if there are any of the following within 10km of your site (or within 15km for coal or oil-fired power stations):

#### Air Quality Assessment

- Special Protection Areas (SPAs);
- Special Areas of Conservation (SACs); and
- Ramsar sites (protected wetlands).

Examining if there are any of the following within 2km of your site:

- Sites of Special Scientific Interest (SSSIs); and
- Local Nature Sites (ancient woods, local wildlife sites and national and local nature reserves).

Some larger (greater than 50 megawatt) emitters may be required to screen to 15km for European sites and to 10km or 15km for SSSIs.

Following a review, three ecological site located close to the site was identified as below.

 Humber Estuary SPA, SAC, Ramsar, SSSI – Located approximately 900 m south of the boiler house at its closest point;

The identified ecological site has been included as receptor in the assessment.

There is a Melton Bottom Chalk Pit SSSI located to the north of the boiler house. This site, however, is not included in the assessment as it is identified as of importance only for geology.

## **5.3 EMISSION SOURCES**

## **5.3.1 Emission Sources from Boilers**

This air quality assessment for the plant has been based on the installation of 41 Orlan Super 130 kWh biomass boilers.

The emissions from the boilers have been calculated using the information on its specifications and a boiler emission testing report. The pollutant mass emission rates used within AERMOD are presented in *Table 5-3*.

Table 5-3. Orlan Super 130 kWtt	Biomass Boiler Stack Emissions
---------------------------------	--------------------------------

Parameter	Angus Orlan Super 130 kW Boiler (Each Boiler)	Unit
Fuel Consumptions	24.5 <sup>a</sup>	kg/hr
Fuel Humidity	15 ª	%
CV (Net, Dry basis)	19.1 <sup>b</sup>	MJ/kg
Dry Flue gas Volume at 10% of $\ensuremath{O}_2$	479 <sup>b</sup>	m³/MJ
NO <sub>x</sub> Emission rate	145 mg/m³ at 10% O <sub>2</sub> °	mg/m³
PM <sub>10</sub> Emission rate	40 mg/m³ at 10% $O_2$ °	mg/m <sup>3</sup>

#### Air Quality Assessment

CO Emission rate	1928 mg/m³ at 10% $O_2$ °	mg/m <sup>3</sup>
Mass NO <sub>x</sub> Emission rate	27.6	g/hr
Mass PM <sub>10</sub> Emission rate	7.6	g/hr
Mass CO Emission rate	367.2	g/hr
Stack Gas Temperature	160 ª	°C
Stack Volumetric Flow Rate at 10% $O_2$ and 0 $C^\circ$	190.5	m³/hr
Stack Oxygen content	6.1°	%
Stack moisture content	15 <sup>d</sup>	%
Modelled stack diameter	0.2 °	m
Stack velocity	6.4 <sup>e</sup>	m/s
Stack Height	12.5	m

Note:

(a) Orlan Super 130 kW<sub>th</sub> Biomass Boiler Instruction Manual and technical data;

(b) Derived from the AEA report of "Conversion of biomass boiler emission concentration data for comparison with renewable heat incentive emission criteria", Ref: AEA/ED46626/AEA/R/3296, May 2012;

(c) Data from the Test Report of 32 – 0119, 31/10/2011;

(d) GLA air quality report of Biomass and CHP Emission standards, March 2013; and

(e) Stack diameter and efflux velocity (after applications of exodraft fan to increase the velocity).

The impact from the boiler emissions has been assessed assuming simultaneous operation of biomass boilers for 8,760 hours per annum and it produces a worst-case assessment.

Figure 5-2 illustrates the location of the modelled emission points for the Orlan Super 130 kWth biomass boilers boiler stacks.

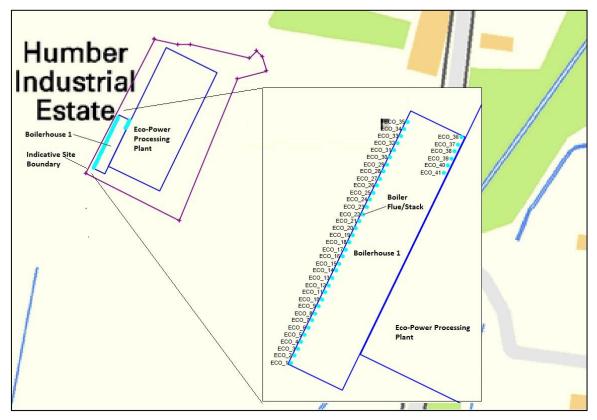


Figure 5-2 Eco-Power Biomass Boiler Stack Locations

## 5.3.2 Emission Sources for Cumulative Impact Assessment

Cumulative impact assessment has been undertaken by assessing the adjacent industrial points sources, including Transwaste's biomass boilers and Energy Recovery Facility.

Transwaste Ltd operates on the Gibson Lane site and recently received planning permission for three 0.95 MWth biomass boilers burning waste wood and providing process heating for on-site Refuse Derived Fuel (RDF) and Solid Recovered Fuel (SRF) waste treatment processes.

An energy recovery facility (ERF), operated by HRS Energy, was recently granted planning permission at the Gibson Lane site, and will utilise some of the RDF and SRF produced on site to generate electricity for export to the National Grid. The energy recovery facility consists of two emission flues/stacks and it is proposed one stack encases of two flows. Within the modelling assessment, both flues have been modelled as a single stack source of emissions. The energy recovery facility has currently got planning approval, to operate an increase stack height of 55m above ground level.

Therefore, following emission sources have been included in the cumulative assessment:

(1) 41 Orlan Super 130 kWth biomass boilers proposed by Eco-Powers;

- (2) Three Kalvis 0.95  $MW_{th}$  biomass boilers operated by Transwaste Ltd; and
- (3) Two emission flues operated by HRS Energy.

#### Emission Calculations for Kalvis 0.95 MWth Biomass Boilers

The emissions from the Kalvis biomass boilers have been calculated using the information on its specifications and a boiler emission testing report. The pollutant mass emission rates used within AERMOD and stack gas parameters are presented in *Table 5-4*.

#### Table 5-4. Kalvis 0.95 MWth Biomass Boilers Stack Emissions and Stack Parameters

Parameter	Angus Orlan Super 130 kW Boiler (Each Boiler)	Unit
Fuel Consumptions	419 ª	kg/hr
Fuel Humidity	31 <sup>a, d</sup>	%
Calorific Value (Dry base)	2407 <sup>d</sup>	Kcal/kg
Calculated CV (Net, Dry basis)	10.07	MJ/kg
Dry Flue gas Volume at 10% of $O_2$ for Wood	479 <sup>b</sup>	m³/MJ
NO <sub>x</sub> Emission rate	183 to 269 mg/m³ at 10% $O_2\ensuremath{^d}$	mg/m <sup>3</sup>
PM <sub>10</sub> Emission rate	51 mg/m³ at 10% O <sub>2</sub> <sup>d</sup>	mg/m³
CO Emission rate	675 to 995 mg/m³ at 10% $O_2$ d	mg/m <sup>3</sup>
Mass NO <sub>x</sub> Emission rate	513 °	g/hr
Mass PM <sub>10</sub> Emission rate	103.1	g/hr
Mass CO Emission rate	2011.1 <sup>f</sup>	g/hr
Stack Gas Temperature	185 ª	°C
Stack Volumetric Flow Rate at 10% $O_2$ and 0 C°	2021.2	m³/hr
Stack Oxygen content	6.1 <sup>9</sup>	%
Stack moisture content	15 <sup>h</sup>	%
Modelled stack diameter	0.48 ª	m
Stack velocity	4.41	m/s
Stack Height	11.0	m

Note:

(a) Biomass Boiler technical data;

(b) The emission limit from Defra Guidance (an AEA Report for Defra) "Conversion of biomass boiler emission concentration data for comparison with renewable heat incentive emission criteria", Ref: AEA/ED46626/AEA/R/3296, May 2012;

(c) Gas volumetric flow rates have been derived from the AEA report of "Conversion of biomass boiler emission concentration data for comparison with renewable heat incentive emission criteria", Ref: AEA/ED46626/AEA/R/3296, May 2012;

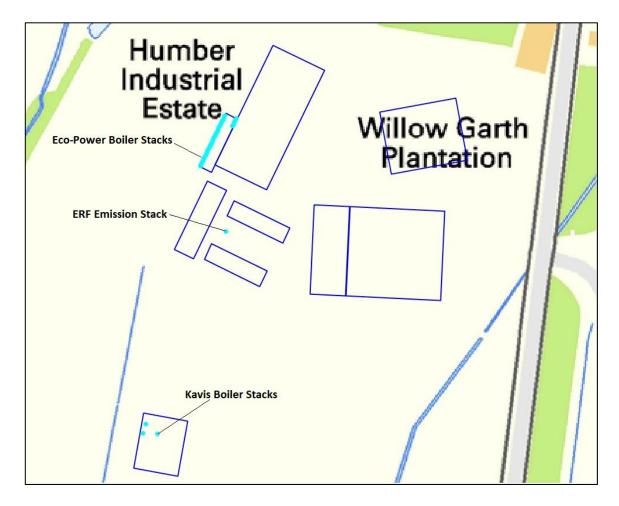
(d) Data from the Test Report No. 11/10-LG, 28/04/2010;

- (e) Calculated to meet the emission limit of 150g/GJ in the Guidance of "Conversion of biomass boiler emission concentration data for comparison with renewable heat incentive emission criteria", Ref: AEA/ED46626/AEA/R/3296, May 20122;
- (f) Using the maximum of measured concentration for a worst-case assessment;
- (g) Using Orlan Super 130 kWth Biomass Boiler; and
- (h) GLA air quality report of Biomass and CHP Emission standards, March 2013.

The impact from the boiler emissions has been assessed assuming simultaneous operation of biomass boilers for 8,760 hours per annum and it produces a worst-case assessment.

*Figure 5-3.* Kalvis Boiler Stack Locations and ERF Emission Point *Figure 5-3* illustrates the location of the modelled emission points for the Kalvis boiler stacks.





#### **Emission Calculations for Energy Recovery Facility**

The emission data for energy recovery facility are taken from the report of "Air quality assessment for planning variation, Melton Energy from Waste Plant, HRS Energy", produced by WSP, project No. 70042100, January 2018.

The stack emissions and stack parameters are presented in Table 5-5.

Table 5-5. Summary of Stack Discharge Conditions (Flue 1&2 Combined) (after WSP Report, January 2018)					
Energy Recovery Facility					
Parameter Flue 1 & 2 Assessed as a Single Unit					

Parameter	Flue 1 & 2 Assessed as a Single Point	Unit
Stack Gas Temperature	150	°C
Volumetric Flow Rate dry, 11% $O_2$ and 0 $C^\circ$	52	Nm³/s
Stack volumetric Flow Rate 18.11% $H_2O,4.97\%~O_2$ and 150 C°	61.14	Am³/s
Stack Efflux velocity	19.86	m/s
Modelled stack diameter	1.98	m
Stack Height	55	m
Mass $NO_x$ Emission rate (based on half hourly average concentrations)	10.399	g/s
Mass $PM_{10}$ Emission rate (based on half hourly average concentrations)	0.78	g/s
Mass CO Emission rate (Assume 5 times of NO <sub>x</sub> )	51.995	g/s
Stack OS Grid Reference	X: 496710,	Y:425461

The impact from the facility emissions has been assessed assuming simultaneous operations for 8,760 hours per annum and it produces a worst-case assessment.

Figure 5-3 illustrates the location of the modelled emission point for the ERF stacks.

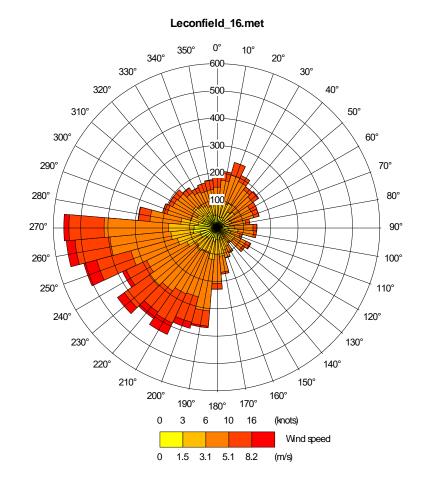
## 5.4 MODEL SCENARIOS

Two operations scenarios have been assessed for Eco-Power's biomass boilers.

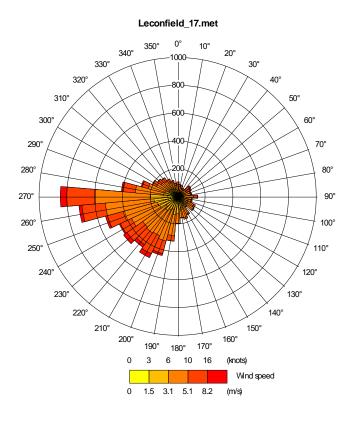
- Scenario 1 normal operation scenario. The design heat demand of the associated Eco-Power drying plant only requires 35 Orlan Super 130 kWth biomass boilers to be operate at any one time.
- Scenario 2 theoretical worst-case scenario. It is theoretically possible for all 41 Orlan Super 130 kW<sub>th</sub> biomass boilers to operate and this scenario is to provide a worst-case assessment.

## 5.5 METEOROLOGICAL DATA

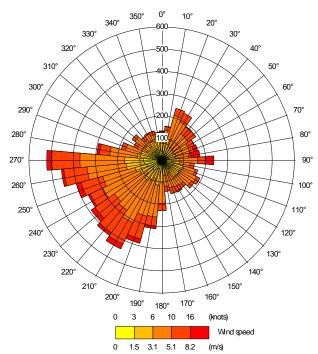
The 3-year meteorological data (2016, 2017 and 2018) used in the assessment is derived from Leconfield weather station, which is considered representative of conditions within the vicinity of the site, with all the complete parameters necessary for the AERMOD model. Reference should be made to *Figure 5-4* for an illustration of the prevalent wind conditions at the Leconfield weather station.



### Figure 5-4. Meteorological Data/Windrose 2016 to 2018







TETRA TECH

# 5.6 SURFACE CHARACTERISTICS

The land uses surrounding the Site are mostly described as farmland and commercial uses. A surface roughness value of 0.5m for open suburbia area/commercial uses and a surface roughness value of 0.3m for farmland area have been used in the modelling for a worst-case assessment.

## 5.7 BUILDING S IN THE MODELLING ASSESSMENT

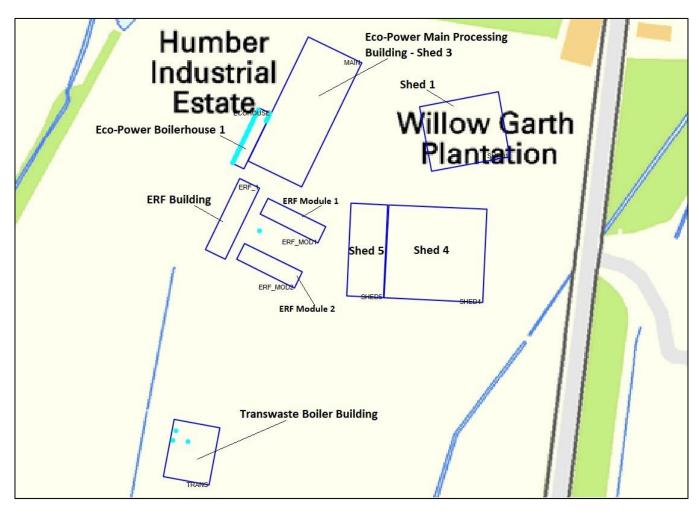
Buildings nearby or immediately adjacent to the stack could potentially cause building downwash effects on emission sources and have therefore been modelled for the proposed development and for all other three development sites. The locations and dimensions of the buildings used in the model are given in *Table 5-6* and illustrated in

### Figure 5-5.

#### *Table 5-6.* Locations and Heights of Building Used in the Model

News		UK NGR (m)		
Name		X	Y	Height (m)
1	Eco-Power Boiler House	496691	425508	8.0
2	Eco-Power Shed 3 - Main Processing Plant	496702	425509	12.15
3	Shed 1	496819	425546	12.5
4	Shed 4	496798	425479	12.5
5	Shed 5	496772	425480	12.5
6	ERF Power Module	496673	425449	24.0
7	ERF Boiler Module 1	496716	425483	24.0
8	ERF Boiler Module 2	496700	425453	24.0
9	Transwaste Boiler Building	496651	425333	6.7

Figure 5-5 Buildings for the Modelling



## **5.8 TREATMENT OF TERRAIN**

The presence of steep terrain can influence the dispersion of emissions and the resulting pollutant concentrations. USEPA guidance indicates that terrain effects should be considered if the gradient exceeds 1:10. A digital terrain file in the UK Ordnance Survey (OS) Landranger format (.NTF) has been used in the assessment.

# 5.9 NO<sub>X</sub> TO NO<sub>2</sub> CONVERSION

Emissions of NO<sub>x</sub> from combustion processes are predominantly in the form of NO. Excess oxygen in the combustion gases and further atmospheric reactions cause the oxidation of NO to NO<sub>2</sub>. Given the short travel time to the areas of maximum concentration and the rate of reaction to convert NO to NO<sub>2</sub>, it is unlikely that more than 30% of the NO<sub>x</sub> is present at ground level as NO<sub>2</sub>. This conversion factor is based on comparison of ambient NO and NO<sub>2</sub> continuous measurements evaluated over recent years.

Ground level NO<sub>x</sub> concentrations have been predicted through dispersion modelling. NO<sub>2</sub> concentrations reported in the results section assume 70% conversion from NO<sub>x</sub> to NO<sub>2</sub> for annual means and a 35% conversion for short term (hourly) concentrations, based upon EA methodology<sup>1</sup>.

# 5.10 MODELLING UNCERTAINTY

Uncertainty in dispersion modelling predictions can be associated with a variety of factors, including:

- Model uncertainty due to model limitations;
- Data uncertainty including emissions estimates, background estimates and meteorology; and,
- Variability randomness of measurements used.

However, potential uncertainties in model results have been minimised as far as practicable and worst-case inputs considered in order to provide a robust assessment. This included the following:

- Choice of model AERMOD is a commonly used atmospheric dispersion model and results have been verified through a number of studies to ensure predictions are as accurate as possible.
- Facility operating parameters Operational parameters were provided for the facility.

<sup>&</sup>lt;sup>1</sup> Conversion Ratios for NO<sub>x</sub> and NO<sub>2</sub>, Environment Agency, updated.

- Background concentrations Background pollutant concentrations were obtained from a number of recognised sources in order to consider baseline levels in the vicinity of the site, as detailed within the main report text.
- Variability All model inputs are as accurate as possible and worst-case conditions have been considered where necessary in order to ensure a robust assessment of potential pollutant concentrations.

# 6.0 DETAILED MODELLING ASSESSMENT RESULTS: PROTECTION OF HUMAN HEALTH

The detailed modelling assessment of process emissions for the proposed Eco-Power boiler operations was undertaken using the input parameters detailed in Section 5.

All predicted concentrations have been compared to the relevant environmental assessment criteria, as detailed in Sections 2 and 3.

# 6.1 NITROGEN DIOXIDE (NO<sub>2</sub>) – SCENARIO 1

### Long-Term (Annual Mean) NO<sub>2</sub> – Scenario 1

The long-term emissions of NO<sub>2</sub> from the source considered were assessed for all 3 years of meteorological data. The maximum process contributions (PCs) within the modelled receptor locations and their associated predicted environmental concentrations (PECs) are compared against the relevant AQO, in *Table 6-1*.

From the meteorological dataset, the year resulting in maximum long-term NO<sub>2</sub> PC concentration was identified as 2017. The predicted maximum PC occurs at the receptor location of 100 Gibson Lane South (D1).

The maximum NO<sub>2</sub> PC in Table 6.1 is  $1.22 \ \mu g/m^3$  and the associated NO<sub>2</sub> PEC is  $12.49 \ \mu g/m^3$ , which is below the relevant long-term AQS of 40  $\ \mu g/m^3$  for the protection of human health.

	Year	Process Contribution (PC) (µg/m³)	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	Easting (m)	Northing (m)
$NO_2$	2016	1.13	2.83	11.27	12.41	496955	425795
NO <sub>2</sub>	2017	1.22	3.05	11.27	12.49	496955	425795
NO <sub>2</sub>	2018	1.19	2.97	11.27	12.46	496955	425795

Table 6-1. Maximum Long-Term (Annual Mean) Concentrations of NO2 – Scenario 1

*Table 6-2* presents a summary of the predicted nitrogen dioxide concentrations, both PCs and PECs, at the modelled receptors locations.

The impact description of changes associated with the operations of the engines with respect to annual mean NO<sub>2</sub> exposure has been assessed with reference to the criteria in Section 3. The outcomes of the assessment are summarised below.

	Receptors	Predicte	d Annual Mean Co	oncentration (µ	ıg/m³) – 2017 Met Data	a, and NO₂ Impa	act Description at	Receptors
ID	Name	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO	PEC as percentage of AQO	Impact Descriptor
D1	100 Gibson Lane South	1.22	3.05	11.27	12.49	31.2%	$\leq$ 75 of AQO	Negligible
D2	88 Gibson Lane South	0.91	2.29	11.27	12.19	30.5%	$\leq$ 75 of AQO	Negligible
D3	54 Gibson Lane	0.46	1.14	14.84	15.29	38.2%	$\leq$ 75 of AQO	Negligible
D4	The Coach House, Melton Grange, Main Road	0.33	0.82	14.84	15.16	37.9%	$\leq$ 75 of AQO	Negligible
D5	21 Brickyard Lane	0.35	0.89	14.84	15.19	38.0%	$\leq$ 75 of AQO	Negligible
D6	25 the triangle, North Ferriby	0.32	0.81	12.09	12.41	31.0%	$\leq$ 75 of AQO	Negligible
D7	Lowcroft Farm, Lowfield Lane	0.25	0.62	14.55	14.80	37.0%	$\leq$ 75 of AQO	Negligible
D8	South Hunsley School, 41 East Dale Road	0.23	0.59	14.55	14.79	37.0%	$\leq$ 75 of AQO	Negligible
D9	62 Common Lane	0.09	0.23	13.26	13.35	33.4%	$\leq$ 75 of AQO	Negligible
D10	79 Plantation Drive	0.23	0.58	14.84	15.07	37.7%	$\leq$ 75 of AQO	Negligible
D11	75 Southfield Drive	0.19	0.48	12.09	12.28	30.7%	$\leq$ 75 of AQO	Negligible
D12	87 Riverview Avenue <sup>a</sup>	0.27	0.66	14.84	15.10	37.8%	$\leq$ 75 of AQO	Negligible
D13	29 Marine Avenue	0.26	0.65	14.84	15.10	37.7%	$\leq$ 75 of AQO	Negligible
D14	12 Plantation Drive	0.30	0.74	14.84	15.13	37.8%	$\leq$ 75 of AQO	Negligible
D15	66 Plantation Drive	0.27	0.67	14.84	15.11	37.8%	$\leq$ 75 of AQO	Negligible
D16	10 Ashdale Park	0.23	0.57	14.84	15.06	37.7%	$\leq$ 75 of AQO	Negligible
	AQO 40 μg/m³							

### Table 6-2. Long-Term (Annual Mean) Concentrations of NO2 and Impact Description of Effects at Receptors - Scenario 1

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

The percentage changes in process contribution of NO<sub>2</sub> relative to the AQAL as a result of the facility operations at all receptor locations, with respect to NO<sub>2</sub> exposure, are determined to be 3.05% or less. The impact is determined to be 'negligible', based on the methodology outlined in Section 3. The effect of the facility operations on the local area is considered to be insignificant.

The predicted long-term NO<sub>2</sub> concentrations from the facility operations are considered acceptable for the protection of human health.

### Short-Term (1-Hour Mean) NO2 – Scenario 1

The short-term emissions of NO<sub>2</sub> from the source considered were assessed for all 3 years of meteorological data. The maximum PCs within the modelled receptor locations and their associated PECs are compared against the relevant AQS, in *Table 6-3*.

From the meteorological dataset, the year resulting in maximum short-term NO<sub>2</sub> PC concentration was identified during 2018. The predicted maximum short-term PC occurs at the receptor location of 100 Gibson Lane South (D1).

The highest short-term NO<sub>2</sub> PC in Table 6.3 is 23.42  $\mu$ g/m<sup>3</sup> and the associated short-term NO<sub>2</sub> PEC is 45.96  $\mu$ g/m<sup>3</sup>, which is below the relevant short-term AQO of 200  $\mu$ g/m<sup>3</sup> for the protection of human health.

	Year	Process Contribution (PC) (µg/m³)	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	Easting (m)	Northing (m)		
NO <sub>2</sub>	2016	21.96	10.98	22.55	44.51	496955	425795		
NO <sub>2</sub>	2017	19.70	9.85	22.55	42.25	496955	425795		
NO <sub>2</sub>	2018	23.42	11.71	22.55	45.96	496955	425795		
AQOs	200 µg/m³								

Table 6-3. Maximum Short-Term (1-Hour Mean, 99.79th Percentile) Concentrations of NO2 - Scenario 1

The short-term  $NO_2$  PEC concentrations have been calculated at each of the discrete receptors listed for the worst meteorological year of 2017 and these results are detailed in *Table 6-4*.

	Receptors	Predicted	1-hour Mean (9	9.79 <sup>th</sup> Percentile	) Concentration (µg/m <sup>3</sup>	) – 2018 Met Data	
ID	Name	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO	
D1	100 Gibson Lane South	23.42	11.71	22.55	45.96	22.98	
D2	88 Gibson Lane South	18.06	9.03	22.55	40.61	20.31	
D3	54 Gibson Lane	11.75	5.87	29.67	41.42	20.71	
D4	The Coach House, Melton Grange, Main Road	8.98	4.49	29.67	38.65	19.33	
D5	21 Brickyard Lane	11.09	5.55	29.67	40.77	20.38	
D6	25 the triangle, North Ferriby	7.47	3.74	24.18	31.65	15.83	
D7	Lowcroft Farm, Lowfield Lane	14.81	7.40	29.10	43.91	21.95	
D8	South Hunsley School, 41 East Dale Road	9.71	4.86	29.10	38.81	19.41	
D9	62 Common Lane	6.46	3.23	26.52	32.98	16.49	
D10	79 Plantation Drive	5.10	2.55	29.67	34.77	17.39	
D11	75 Southfield Drive	6.05	3.03	24.18	30.23	15.12	
D12	87 Riverview Avenue	7.55	3.77	29.67	37.22	18.61	
D13	29 Marine Avenue	6.74	3.37	29.67	36.42	18.21	
D14	12 Plantation Drive	8.01	4.01	29.67	37.69	18.84	
D15	66 Plantation Drive	7.85	3.93	29.67	37.53	18.76	
D16	10 Ashdale Park	7.07	3.54	29.67	36.75	18.37	
AQ Os Note:	200 μg/m³						

Table 6-4. Maximum Short-Term (1-Hour Mean, 99.79th Percentile) Concentrations of NO2 at Receptors

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

As shown in *Table 6-4*, there are no exceedances of the short-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted impacts are significantly below the AQO of 200  $\mu$ g/m<sup>3</sup>.

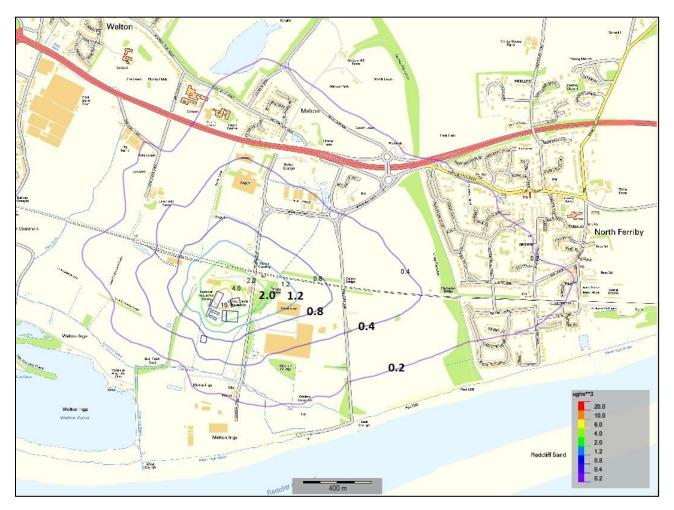
Therefore, the predicted short-term NO<sub>2</sub> concentrations from the facility operations are considered acceptable for the protection of human health.

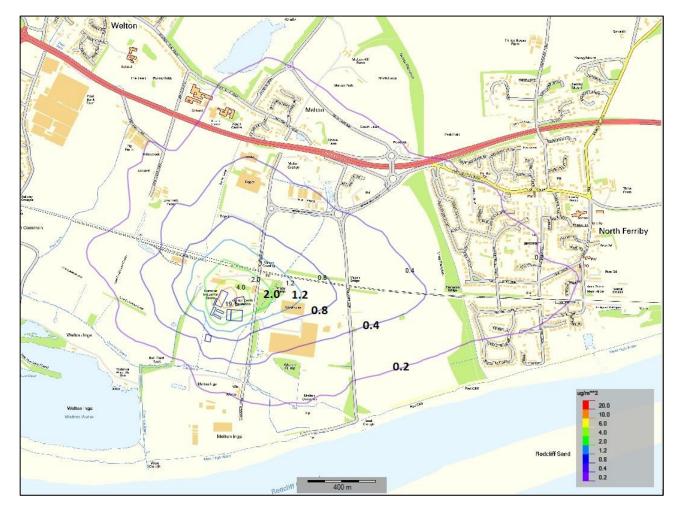
The contour plots of the predicted long-term and short-term ground level PCs of NO<sub>2</sub> for all receptors, including discrete and grid receptors are presented in *Figure 6-1* and *Figure 6-2*. The contour plots show that the predicted

maximum concentrations occur adjacent to the emission sources, with a predicted decrease in concentration with the increased distance from the stacks.

The contour plots of the predicted long-term ground level PCs of NO<sub>x</sub> and 24-hr NO<sub>x</sub> for all receptors, including discrete and grid receptors are presented in *Figure 6-3* and *Figure 6-4*.

*Figure 6-1.* Predicted Ground level Long-Term NO<sub>2</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 1

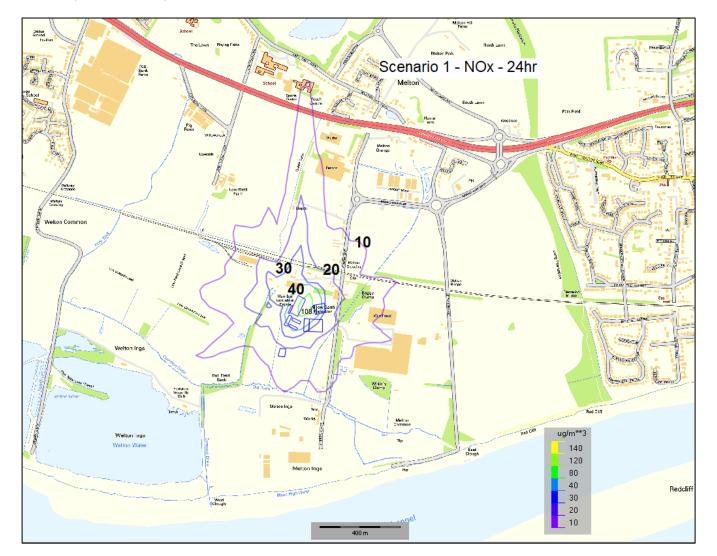




*Figure 6-2.* Predicted Ground Level Short-Term NO<sub>2</sub> Concentrations (PC, 1-Hour Mean, 99.79<sup>th</sup> Percentile) from the Operation of Eco-Power Boilers (2018 Met Data) – Scenario 1

*Figure 6-3.* Predicted Ground level Long-Term NO<sub>x</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 1





*Figure 6-4.* Predicted Ground level Short-Term NO<sub>x</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2018 Met Data) – Scenario 1

# 6.2 PARTICULATE MATTER (PM<sub>10</sub>) – SCENARIO 1

### Long-Term (Annual Mean) PM<sub>10</sub>

The predicted long-term PCs and PECs from 2017 meteorological data, the year resulting in maximum long-term PM<sub>10</sub> PC concentration, at receptor locations are compared against the relevant AQS, in *Table 6-5*.

*Table 6-5* The Long-Term (Annual Mean) Concentrations of PM<sub>10</sub> and Significance of Effects at Key Receptors – Scenario 1

	Receptors		Predicte		Concentration		Met Data, and	
ID	Name	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (μg/m³)	PEC as percentage of AQO	PEC as percentage of AQO	Impact Descriptor
D1	100 Gibson Lane South	0.48	1.19	13.78	14.25	35.6%	<75% of AQAL	Negligible
D2	88 Gibson Lane South	0.36	0.89	13.78	14.13	35.3%	<75% of AQAL	Negligible
D3	54 Gibson Lane	0.18	0.45	15.08	15.26	38.2%	<75% of AQAL	Negligible
D4	The Coach House, Melton Grange, Main Road	0.13	0.32	15.08	15.21	38.0%	<75% of AQAL	Negligible
D5	21 Brickyard Lane	0.14	0.35	15.08	15.22	38.1%	<75% of AQAL	Negligible
D6	25 the triangle, North Ferriby	0.13	0.32	13.52	13.64	34.1%	<75% of AQAL	Negligible
D7	Lowcroft Farm, Lowfield Lane	0.10	0.24	15.73	15.83	39.6%	<75% of AQAL	Negligible
D8	South Hunsley School, 41 East Dale Road	0.09	0.23	15.73	15.82	39.6%	<75% of AQAL	Negligible
D9	62 Common Lane	0.04	0.09	14.72	14.75	36.9%	<75% of AQAL	Negligible
D10	79 Plantation Drive	0.09	0.23	15.08	15.17	37.9%	<75% of AQAL	Negligible
D11	75 Southfield Drive	0.08	0.19	13.52	13.59	34.0%	<75% of AQAL	Negligible
D12	87 Riverview Avenue <sup>a</sup>	0.10	0.26	15.08	15.19	38.0%	<75% of AQAL	Negligible
D13	29 Marine Avenue	0.10	0.25	15.08	15.18	38.0%	<75% of AQAL	Negligible
D14	12 Plantation Drive	0.12	0.29	15.08	15.20	38.0%	<75% of AQAL	Negligible
D15	66 Plantation Drive	0.10	0.26	15.08	15.19	38.0%	<75% of AQAL	Negligible
D16	10 Ashdale Park	0.09	0.22	15.08	15.17	37.9%	<75% of AQAL	Negligible
	AQO 40 μg/m <sup>3</sup>							

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

As shown in *Table 6-5*, there are no exceedances of the long-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted impacts are significantly below the AQO of 40  $\mu$ g/m<sup>3</sup>.

The percentage change in process concentrations relative to the AQAL as a result of the boiler operations at all receptor locations, with respect to  $PM_{10}$  exposure, are determined to be 1.19% or less. The impact is determined to be 'insignificant', based on the methodology outlined in Section 3.

Therefore, the predicted long-term PM<sub>10</sub> concentrations from the Site are considered acceptable for the protection

of human health.

### Short-Term (24-Hour Mean) PM<sub>10</sub>

The predicted short-term PCs and PECs from 2018 meteorological data, the year resulting in maximum short-term NO<sub>2</sub> PC concentration, at receptor locations are compared against the relevant AQS, in *Table 6-6*.

Table 6-6	The Short-Term	(24-Hour Mean)	) Concentrations of	of PM <sub>10</sub> at Key	Receptors -	Scenario 1
				n i mili at icej	/ Necceptors	

	Receptors	Predicted 24-Ho	our Mean (90.4	1 <sup>th</sup> Percentile) Conce Receptors	entration (μg/m³) – 201	8 Met Data at
ID	Name	Process Contribution (PC) (µg/m³)	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO
D1	100 Gibson Lane South	1.44	2.89	13.78	15.22	30.44
D2	88 Gibson Lane South	1.04	2.07	13.78	14.81	29.62
D3	54 Gibson Lane	0.52	1.03	15.08	15.60	31.20
D4	The Coach House, Melton Grange, Main Road	0.36	0.73	15.08	15.45	30.89
D5	21 Brickyard Lane	0.39	0.78	15.08	15.47	30.94
D6	25 the triangle, North Ferriby	0.29	0.59	13.52	13.81	27.62
D7	Lowcroft Farm, Lowfield Lane	0.34	0.68	15.73	16.07	32.14
D8	South Hunsley School, 41 East Dale Road	0.28	0.55	15.73	16.01	32.01
D9	62 Common Lane	0.15	0.31	14.72	14.87	29.75
D10	79 Plantation Drive	0.23	0.47	15.08	15.32	30.63
D11	75 Southfield Drive	0.20	0.40	13.52	13.72	27.44
D12	87 Riverview Avenue <sup>a</sup>	0.29	0.59	15.08	15.38	30.76
D13	29 Marine Avenue	0.28	0.56	15.08	15.36	30.73
D14	12 Plantation Drive	0.33	0.67	15.08	15.42	30.83
D15	66 Plantation Drive	0.29	0.57	15.08	15.37	30.74
D16	10 Ashdale Park	0.22	0.43	15.08	15.30	30.60
AQOs			50 μg/m	3		

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

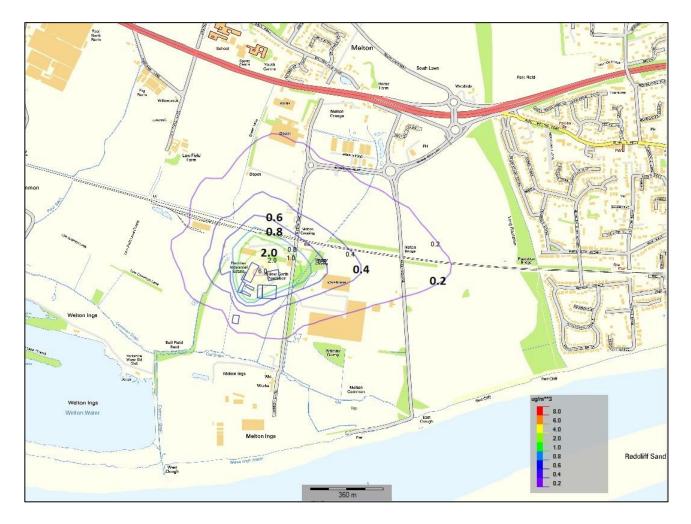
As shown in *Table 6-6*, there are no exceedances of the short-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted impacts are significantly below the AQO of 50  $\mu$ g/m<sup>3</sup>.

Therefore, the predicted short-term PM<sub>10</sub> concentrations from the boiler operations are considered acceptable for the protection of human health.

The contour plots of the predicted long-term ground level PCs of  $PM_{10}$  for all receptors, including discrete and grid receptors are presented in **Figure 6-5**. The contour plots show that the predicted maximum concentrations occur adjacent to the emission source, with a predicted decrease in concentration with the increased distance from the stack.

The contour plots of the predicted short-term ground level PCs of PM<sub>10</sub> for all receptors, including discrete and grid receptors are not presented as the PCs are well below 10% of relevant AQO.

Figure 6-5Predicted Long-Term PM10 Concentrations (PC) from the Operation of Eco-Power Boilers (2017Met Data) – Scenario 1



# 6.3 PARTICULATE MATTER (PM<sub>2.5</sub>)

A worst-case scenario assumption of 100% of  $PM_{10}$  to be  $PM_{2.5}$  has been made in the assessment. The predicted long-term PCs of  $PM_{2.5}$  and the significance of changes associated with the operations of the boilers with respect to annual mean  $PM_{2.5}$  exposure has been presented and assessed in Table 6.7.

Table 6-7 The Long-Term (Annual Mean) Concentrations of PM2.5 and Significance of Effects at Key Receptors

	Receptors	Predicted Annual Mean Concentration (μg/m³) – 2017 Met Data, and PM <sub>2.5</sub> Significance Impacts at Receptors							
ID	Name	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO	PEC as percentage of AQO	Impact Descriptor	
D1	100 Gibson Lane South	0.48	1.90	8.85	9.32	37.3%	<75% of AQAL	Negligible	
D2	88 Gibson Lane South	0.36	1.43	8.85	9.20	36.8%	<75% of AQAL	Negligible	
D3	54 Gibson Lane	0.18	0.71	9.63	9.80	39.2%	<75% of AQAL	Negligible	
D4	The Coach House, Melton Grange, Main Road	0.13	0.51	9.63	9.75	39.0%	<75% of AQAL	Negligible	
D5	21 Brickyard Lane	0.14	0.55	9.63	9.76	39.1%	<75% of AQAL	Negligible	
D6	25 the triangle, North Ferriby	0.13	0.51	8.91	9.04	36.2%	<75% of AQAL	Negligible	
D7	Lowcroft Farm, Lowfield Lane	0.10	0.39	9.91	10.01	40.0%	<75% of AQAL	Negligible	
D8	South Hunsley School, 41 East Dale Road	0.09	0.37	9.91	10.01	40.0%	<75% of AQAL	Negligible	
D9	62 Common Lane	0.04	0.14	9.49	9.52	38.1%	<75% of AQAL	Negligible	
D10	79 Plantation Drive	0.09	0.36	9.63	9.72	38.9%	<75% of AQAL	Negligible	
D11	75 Southfield Drive	0.08	0.30	8.91	8.99	35.9%	<75% of AQAL	Negligible	
D12	87 Riverview Avenue <sup>a</sup>	0.10	0.42	9.63	9.73	38.9%	<75% of AQAL	Negligible	
D13	29 Marine Avenue	0.10	0.40	9.63	9.73	38.9%	<75% of AQAL	Negligible	

D14	12 Plantation Drive	0.12	0.46	9.63	9.74	39.0%	<75% of AQAL	Negligible
D15	66 Plantation Drive	0.10	0.42	9.63	9.73	38.9%	<75% of AQAL	Negligible
D16	10 Ashdale Park	0.09	0.35	9.63	9.71	38.9%	<75% of AQAL	Negligible
	AQO	25µg/m³						

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

As shown in **Table 6-7**, there are no exceedances of the short-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted impacts are significantly below the AQO of  $25 \,\mu g/m^3$ .

The percentage change in process concentrations relative to the AQAL as a result of the boiler operations at all receptor locations, with respect to  $PM_{2.5}$  exposure, are determined to be 1.90% or less. The significance is determined to be 'negligible', based on the methodology outlined in Section 3.

Therefore, the predicted long-term PM<sub>2.5</sub> concentrations from the Site are considered acceptable for the protection of human health.

# 6.4 CARBON MONOXIDE (CO)

Predicted ground level short-term (8-hour running mean) CO concentrations were assessed against the relevant AQO using 2018 met data (the year resulting in maximum short-term PC concentration). The results of the model predictions at each discrete receptor, inclusive of background, are summarised in

### Table 6-8.

#### Table 6-8. Summary of Predicted CO Concentrations

	Receptors	Predicted 1-hour Mean (99.79	<sup>th</sup> Percentile) Concentrat	ion (μg/m³) – 2018 Met Data
ID	Name	Process Contribution (PC) (μg/m³)	PC as %age of AQO	PEC (a) (PC + Background) (µg/m³)
D1	100 Gibson Lane South	406.42	406.42	4.06
D2	88 Gibson Lane South	299.16	299.16	2.99
D3	54 Gibson Lane	191.74	191.74	1.92
D4	The Coach House, Melton Grange, Main Road	143.75	143.75	1.44
D5	21 Brickyard Lane	104.79	104.79	1.05

D6	25 the triangle, North Ferriby	129.86	129.86	1.30			
D7	Lowcroft Farm, Lowfield Lane	157.39	157.39	1.57			
D8	South Hunsley School, 41 East Dale Road	127.81	127.81	1.28			
D9	62 Common Lane	79.261	79.26	0.79			
D10	79 Plantation Drive	62.656	62.66	0.63			
D11	75 Southfield Drive	65.427	65.43	0.65			
D12	87 Riverview Avenue	92.637	92.64	0.93			
D13	29 Marine Avenue	100.99	100.99	1.01			
D14	12 Plantation Drive	126.38	126.38	1.26			
D15	66 Plantation Drive	95.338	95.34	0.95			
D16	10 Ashdale Park	107.48	107.48	1.07			
AQOs	10000						
Mata							

Note:

<sup>(a)</sup> Inclusive of Background concentration of 134µg/m<sup>3</sup>

#### As indicated in

**Table 6-8**, the maximum predicted 8-hour running mean CO process contributions (PC) at receptors is 406.42  $\mu$ g/m<sup>3</sup> when using 2018 met data. The predicted 8-hour running mean PCs of CO at the modelled discrete receptors are well below 4.06% of the short-term AQO, which are considered insignificant.

The maximum PEC of 8-hour running mean CO emissions is 540.42  $\mu$ g /m<sup>3</sup>, which does not exceed the relevant short-term AQS of 10000  $\mu$ g/m<sup>3</sup>. Therefore, the short-term PECs of CO at all receptors are below the relevant short-term AQS of 10000  $\mu$ g/m<sup>3</sup> for the protection of human health.

# 6.5 NITROGEN DIOXIDE (NO<sub>2</sub>) – SCENARIO 2 (WORST CASE OPERATIONS)

For Scenario 2, only the impact of the nitrogen dioxide on the receptors has been assessment. Other pollutants, such as, PM<sub>10</sub>, PM<sub>2.5</sub> and CO have not included in the assessment due to the impacts of those pollutants from the normal operation scenario are well below the relevant AQO.

Predicted long-term (annual mean) PCs and PECs of NO<sub>2</sub> concentrations were assessed against the relevant AQO using 2017 met data (the year resulting in maximum long-term PC concentration). The results of the model predictions at each discrete receptor, inclusive of background, are summarised in Table 6.9.

	Receptors	Predicte	d Annual Mean Co	oncentration (	ıg/m³) – 2017 Met Data	a, and NO₂ Impa	act Description at	Receptors
ID	Name	Process Contribution (PC) (µg/m³) PC as %ag AQO		Traffic Background (μg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO	PEC as percentage of AQO	Impact Descriptor
D1	100 Gibson Lane South	1.44	3.60	11.27	12.71	31.8%	$\leq$ 75 of AQO	Negligible
D2	88 Gibson Lane South	1.09	2.73	11.27	12.37	30.9%	$\leq$ 75 of AQO	Negligible
D3	54 Gibson Lane	0.54	1.36	14.84	15.38	38.5%	$\leq$ 75 of AQO	Negligible
D4	The Coach House, Melton Grange, Main Road	0.39	0.98	14.84	15.23	38.1%	$\leq$ 75 of AQO	Negligible
D5	21 Brickyard Lane	0.42	1.04	14.84	15.25	38.1%	$\leq$ 75 of AQO	Negligible
D6	25 the triangle, North Ferriby	0.38	0.95	12.09	12.47	31.2%	$\leq$ 75 of AQO	Negligible
D7	Lowcroft Farm, Lowfield Lane	0.29	0.72	14.55	14.84	37.1%	$\leq$ 75 of AQO	Negligible
D8	South Hunsley School, 41 East Dale Road	0.27	0.68	14.55	14.82	37.1%	$\leq$ 75 of AQO	Negligible
D9	62 Common Lane	0.11	0.26	13.26	13.36	33.4%	$\leq$ 75 of AQO	Negligible
D10	79 Plantation Drive	0.27	0.68	14.84	15.11	37.8%	$\leq$ 75 of AQO	Negligible
D11	75 Southfield Drive	0.22	0.56	12.09	12.31	30.8%	$\leq$ 75 of AQO	Negligible
D12	87 Riverview Avenue <sup>a</sup>	0.31	0.78	14.84	15.15	37.9%	$\leq$ 75 of AQO	Negligible
D13	29 Marine Avenue	0.30	0.76	14.84	15.14	37.8%	$\leq$ 75 of AQO	Negligible
D14	12 Plantation Drive	0.35	0.87	14.84	15.18	38.0%	$\leq$ 75 of AQO	Negligible
D15	66 Plantation Drive	0.31	0.79	14.84	15.15	37.9%	$\leq$ 75 of AQO	Negligible
D16	10 Ashdale Park	0.27	0.66	14.84	15.10	37.8%	$\leq$ 75 of AQO	Negligible
	AQO				40 µg/m³			

### Table 6-9. Long-Term (Annual Mean) Concentrations of NO2 and Impact Description of Effects at Receptors - Scenario 2

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

There are no exceedances of the long-term NO<sub>2</sub> AQO at any of the identified sensitive receptors for Scenario 2. The predicted impacts are significantly below the AQO of  $40\mu g/m^3$ .

The percentage changes in process contribution of NO<sub>2</sub> relative to the AQAL as a result of the boiler operations at all receptor locations, with respect to NO<sub>2</sub> exposure, are determined to be 3.60% or less. The impact is determined to be 'negligible', based on the methodology outlined in Section 3. The effect of the proposed boiler operations on the local area is considered to be insignificant for Scenario 2.

The predicted long-term NO<sub>2</sub> concentrations from the proposed development are considered acceptable for the protection of human health for Scenario 2.

### Short-Term (1-Hour Mean) NO<sub>2</sub> – Scenario 2

Predicted short-term (1hour mean) PCs and PECs of NO<sub>2</sub> concentrations were assessed against the relevant AQO using 2018 met data (the year resulting in maximum long-term PC concentration). The results of the model predictions at each discrete receptor, inclusive of background, are summarised in Table 6.10.

*Table 6-10.* Maximum Short-Term (1-Hour Mean, 99.79th Percentile) Concentrations of NO<sub>2</sub> at Receptors – Scenario 2

	Receptors	Predicted	1-hour Mean (	99.79 <sup>th</sup> Percentile	) Concentration (µg/m <sup>3</sup>	) – 2018 Met Data
ID	Name	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO
D1	100 Gibson Lane South	26.77	13.38	22.55	49.32	24.66
D2	88 Gibson Lane South	21.39	10.69	22.55	43.94	21.97
D3	54 Gibson Lane	14.50	7.25	29.67	44.17	22.09
D4	The Coach House, Melton Grange, Main Road	10.93	5.47	29.67	40.61	20.30
D5	21 Brickyard Lane	12.97	6.49	29.67	42.65	21.32
D6	25 the triangle, North Ferriby	8.87	4.44	24.18	33.05	16.53
D7	Lowcroft Farm, Lowfield Lane	16.79	8.39	29.10	45.89	22.94
D8	South Hunsley School, 41 East Dale Road	11.34	5.67	29.10	40.44	20.22
D9	62 Common Lane	7.77	3.89	26.52	34.29	17.14
D10	79 Plantation Drive	5.90	2.95	29.67	35.58	17.79
D11	75 Southfield Drive	7.06	3.53	24.18	31.24	15.62
D12	87 Riverview Avenue	8.90	4.45	29.67	38.57	19.29
D13	29 Marine Avenue	8.12	4.06	29.67	37.80	18.90

D14	12 Plantation Drive	9.49	4.74	29.67	39.16	19.58
D15	66 Plantation Drive	9.10	4.55	29.67	38.77	19.39
D16	10 Ashdale Park	8.21	4.10	29.67	37.88	18.94
AQOs			200	) µg/m³		

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

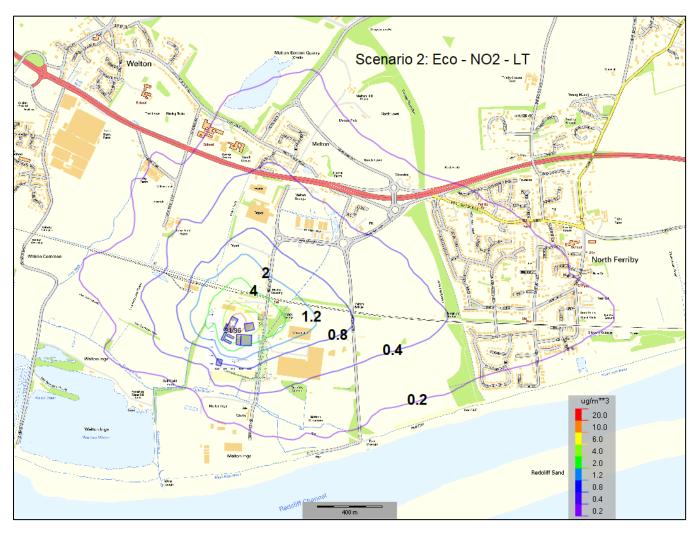
As shown in *Table 6-4*, there are no exceedances of the short-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted impacts are significantly below the AQO of 200  $\mu$ g/m<sup>3</sup>.

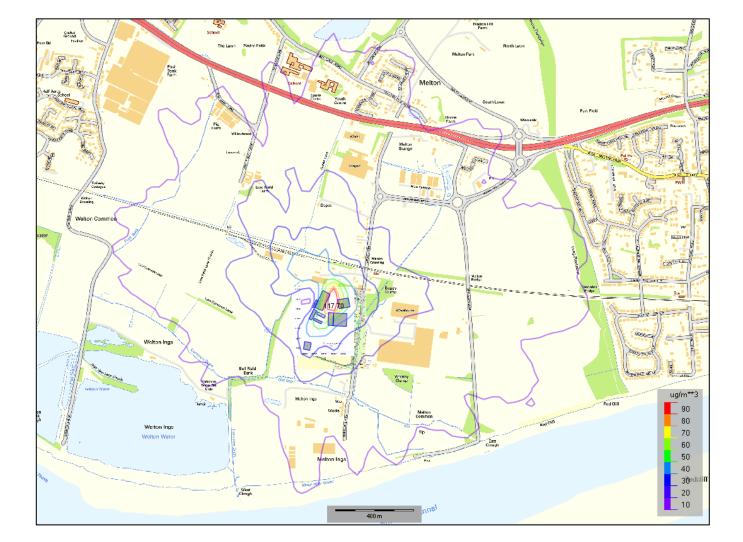
Therefore, the predicted short-term NO<sub>2</sub> concentrations from the facility operations are considered acceptable for the protection of human health.

The contour plots of the predicted long-term and short-term ground level PCs of NO<sub>2</sub> for all receptors, including discrete and grid receptors are presented in *Figure 6-6* and *Figure 6-7*. The contour plots show that the predicted maximum concentrations occur adjacent to the emission sources, with a predicted decrease in concentration with the increased distance from the stacks.

The contour plots of the predicted long-term ground level PCs of NO<sub>x</sub> and 24-hr NO<sub>x</sub> for all receptors, including discrete and grid receptors are presented in *Figure 6-8* and *Figure 6-9*.

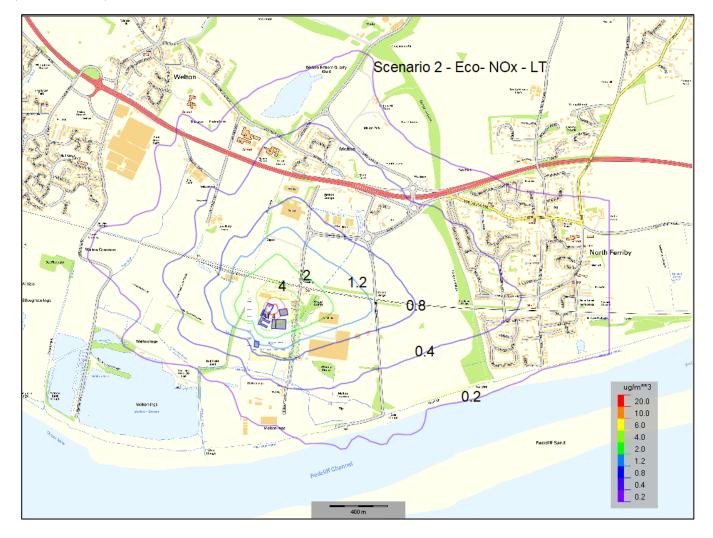
*Figure 6-6.* Predicted Ground level Long-Term NO<sub>2</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 2





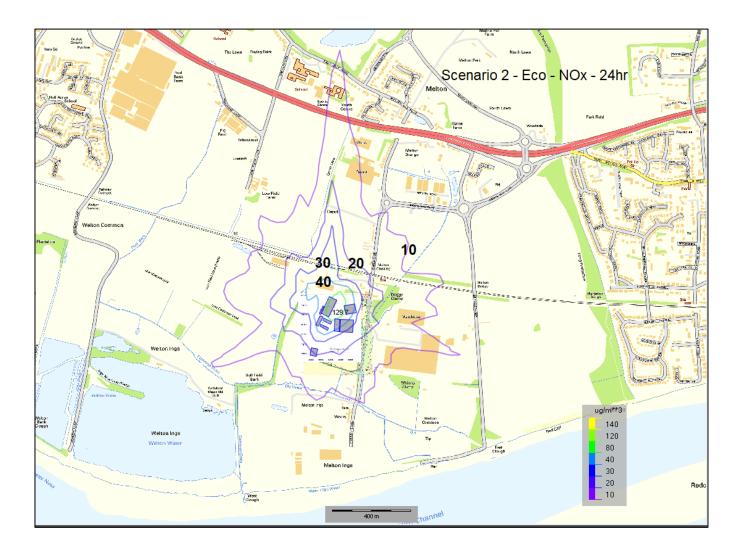
*Figure 6-7.* Predicted Ground Level Short-Term NO<sub>2</sub> Concentrations (PC, 1-Hour Mean, 99.79<sup>th</sup> Percentile) from the Operation of Eco-Power Boilers (2018 Met Data) – Scenario 2

*Figure 6-8.* Predicted Ground level Long-Term NO<sub>x</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2017 Met Data) – Scenario 2



TETRA TECH

*Figure 6-9.* Predicted Ground level Short-Term (24 hr) NO<sub>x</sub> Concentrations (PC) from the Operation of Eco-Power Boilers (2018 Met Data) – Scenario 2



# 7.0 HABITAT ASSESSMENT

The habitat assessment has been undertaken for the following identified nature conservation.

• Humber Estuary SPA, SAC, Ramsar, SSSI;

The long-term and short-term concentrations among those ecological sites have been calculated for habitat assessment against relevant critical loads, using 2017 met data (the year resulting in maximum long-term and short-term PC concentrations).

# 7.1 PREDICTED NITROGEN OXIDE CONCENTRATIONS – SCENARIO 1

Predicted Nitrogen Oxide Concentrations Compared to Critical Levels of Long-Term and Short-Term NO<sub>x</sub> (as NO<sub>2</sub>)

*Table 7-1* presents a summary of the predicted nitrogen oxide concentrations using 2017 and 2018 met data (the year resulting in maximum long-term and short-term PC concentrations respectively) at the Humber Estuary ecological receptor locations.

*Table 7-1.* Summary of Cumulative Predicted NO<sub>x</sub> Concentrations for Protection of Vegetation and Ecosystems – Scenario 1

		Predicted	Annual Me	an Concentra	tion (µg/m³)	Predicted 24-hour Mean Concentration (µg/m³)				
Ecological Receptor		Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Background (µg/m <sup>3</sup> )	PEC (PC + Background) (µg/m <sup>3</sup> )	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Background (µg/m³)	PEC (PC + Background) (µg/m <sup>3</sup> )	
E1	Humber Estuary SPA, SAC, Ramsar, SSSI 1	0.05	0.17	14.25	14.30	1.69	2.25	16.82	18.50	
E2	Humber Estuary SPA, SAC, Ramsar, SSSI 2	0.08	0.26	14.82	14.90	4.34	5.78	17.49	21.82	
E3	Humber Estuary SPA, SAC, Ramsar, SSSI 3	0.15	0.50	14.82	14.97	4.71	6.27	17.49	22.19	
E4	Humber Estuary SPA, SAC, Ramsar, SSSI 4	0.21	0.69	14.78	14.99	4.37	5.82	17.44	21.81	
E5	Humber Estuary SPA, SAC, Ramsar, SSSI 5	0.19	0.65	16.60	16.79	2.48	3.31	19.59	22.07	
Þ	AQO/Critical Level (CL)			30 <sup>(c)</sup>		75 <sup>(d)</sup>				

Note:

(a) Inclusive of Background concentrations. The Background concentration was taken from http://www.apis.ac.uk/.
 (b) The Inclusive of Background concentration<sup>s</sup>. The Background concentration was taken from http://www.apis.ac.uk/.

<sup>(c)</sup> The AQO of 30  $\mu$ g/m<sup>3</sup> is the annual standard for the protection of vegetation and ecosystems; and <sup>(d)</sup> The AQO of 75  $\mu$ g/m<sup>3</sup> is the daily standard for the protection of vegetation and ecosystems.

The annual mean NO<sub>x</sub> (as NO<sub>2</sub>) PEC at the ecological receptor locations are below the annual mean critical level of 30  $\mu$ g/m<sup>3</sup> for the protection of vegetation and Ecosystems.

The NO<sub>x</sub> daily (24 hour) predicted environmental concentration at all ecological receptor locations are well below the daily mean critical levels of 75  $\mu$ g/m<sup>3</sup> for the protection of vegetation and Ecosystems.

The significance of changes associated with the operations of the facility with respect to annual mean  $NO_x$  (as  $NO_2$ ) exposure at the ecological receptors has been assessed with reference to the criteria in Section 3. The outcomes of the assessment are summarised in **Table 7-2**.

*Table 7-2.* Long-Term (Annual Mean) Concentrations of NO<sub>2</sub> and Impact Description of Effects at Receptors – Scenario 1

	Receptors	Predicted Annual Mean Concentration (μg/m³) – 2018 Met Data, and NO <sub>2</sub> Impact Description at Receptors									
ID	Name	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO	PEC as percentage of AQO	Impact Descriptor			
E1	Humber Estuary SPA, SAC, Ramsar, SSSI 1	0.05	0.17	14.25	14.30	47.67	≤75% % of AQAL	Negligible			
E2	Humber Estuary SPA, SAC, Ramsar, SSSI 2	0.08	0.26	14.82	14.90	49.66	≤75% % of AQAL	Negligible			
E3	Humber Estuary SPA, SAC, Ramsar, SSSI 3	0.15	0.50	14.82	14.97	49.90	≤75% % of AQAL	Negligible			
E4	Humber Estuary SPA, SAC, Ramsar, SSSI 4	0.21	0.69	14.78	14.99	49.96	≤75% % of AQAL	Negligible			
E5	Humber Estuary SPA, SAC, Ramsar, SSSI 5	0.19	0.65	16.60	16.79	55.98	≤75% % of AQAL	Negligible			

The percentage change in long-term process concentrations relative to the AQAL as a result of the proposed development at all ecological receptor locations, with respect to  $NO_x$  (as  $NO_2$ ) exposure, are determined to be 0.69% or less. The significance is to be 'negligible' for all ecological receptor locations, based on the methodology outlined in Section 3.

As the percentage change in long-term process concentrations relative to the AQAL is below 1% of the relevant critical level for the protection of vegetation and Ecosystems, the long-term process contributions have been screened out against the relevant standard/critical level. The nitrogen deposition assessment has not been undertaken.

Furthermore, Guidance of "A guide to the assessment of air quality impacts on designated nature conservation sites, May 2020, states that:

"5.5.2.3 In March 2015. AQTAG (Air quality Technical Advisory Group) clarified to the planning inspectorate that 'for installations other than intensive pig and poultry farms, AQTAG is confident that a process contribution (PC, as predicted by H1 or a detailed dispersion model) <1% of the relevant critical level or load (CL) can be considered inconsequential and does not need to be included in an in-combination assessment".

Therefore, in-combination habitat assessment (cumulative habitat assessment including other proposed development) does not need to be undertaken.

In summary, the NO<sub>2</sub> impacts from the proposed development are insignificant on all ecological receptors for Scenario 1.

# 7.2 PREDICTED NITROGEN OXIDE CONCENTRATIONS – SCENARIO 2

Predicted Nitrogen Oxide Concentrations Compared to Critical Levels of Long-Term and Short-Term NO<sub>x</sub> (as NO<sub>2</sub>)

*Table 7-3* presents a summary of the predicted nitrogen oxide concentrations using 2017 and 2018 met data (the year resulting in maximum long-term and short-term PC concentrations respectively) at the Humber Estuary ecological receptor locations.

*Table 7-3.* Summary of Cumulative Predicted NO<sub>x</sub> Concentrations for Protection of Vegetation and Ecosystems – Scenario 2

		Predicted	Annual Me	an Concentrat	tion (µg/m³)	Predicted 24-hour Mean Concentration (µg/m³)				
Ecological Receptor		Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Background (µg/m³)	PEC (PC + Background) (µg/m <sup>3</sup> )	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Background (µg/m³)	PEC (PC + Background) (µg/m <sup>3</sup> )	
E1	Humber Estuary SPA, SAC, Ramsar, SSSI 1	0.06	0.20	14.25	14.31	1.98	2.64	0.00	1.98	
E2	Humber Estuary SPA, SAC, Ramsar, SSSI 2	0.09	0.30	14.82	14.91	5.10	6.81	0.00	5.10	
E3	Humber Estuary SPA, SAC, Ramsar, SSSI 3	0.17	0.58	14.82	14.99	5.43	7.24	0.00	5.43	

E4	Humber Estuary SPA, SAC, Ramsar, SSSI 4	0.24	0.80	14.78	15.02	5.08	6.77	0.00	5.08
E5	Humber Estuary SPA, SAC, Ramsar, SSSI 5	0.23	0.76	16.60	16.83	2.92	3.90	0.00	2.92
Α	AQO/Critical Level (CL)			30 <sup>(c)</sup>				75 <sup>(d)</sup>	

Note:

<sup>(a)</sup> Inclusive of Background concentrations. The Background concentration was taken from http://www.apis.ac.uk/.

<sup>(b)</sup> The Inclusive of Background concentration<sup>s</sup>. The Background concentration was taken from http://www.apis.ac.uk/.

(c) The AQO of 30 µg/m<sup>3</sup> is the annual standard for the protection of vegetation and ecosystems; and

<sup>(d)</sup> The AQO of 75 µg/m<sup>3</sup> is the daily standard for the protection of vegetation and ecosystems.

The annual mean NO<sub>x</sub> (as NO<sub>2</sub>) PEC at the ecological receptor locations are below the annual mean critical level of 30  $\mu$ g/m<sup>3</sup> for the protection of vegetation and Ecosystems.

The NO<sub>x</sub> daily (24 hour) predicted environmental concentration at all ecological receptor locations are well below the daily mean critical levels of 75  $\mu$ g/m<sup>3</sup> for the protection of vegetation and Ecosystems.

The significance of changes associated with the operations of the facility with respect to annual mean  $NO_x$  (as  $NO_2$ ) exposure at the ecological receptors has been assessed with reference to the criteria in Section 3. The outcomes of the assessment are summarised in *Table 7-4*.

*Table 7-4.* Long-Term (Annual Mean) Concentrations of NO<sub>2</sub> and Impact Description of Effects at Receptors – Scenario 2

	Receptors	Predicted Annual Mean Concentration ( $\mu$ g/m <sup>3</sup> ) – 2018 Met Data, and NO <sub>2</sub> Impact Description at Receptors									
ID	Name	Process Contribution (PC) (µg/m <sup>3</sup> )	PC as %age of AQO	Traffic Background (µg/m³)	PEC (PC + Background) (µg/m³)	PEC as percentage of AQO	PEC as percentage of AQO	Impact Descriptor			
E1	Humber Estuary SPA, SAC, Ramsar, SSSI 1	0.06	0.20	14.25	14.31	47.70	≤75% % of AQAL	Negligible			
E2	Humber Estuary SPA, SAC, Ramsar, SSSI 2	0.09	0.30	14.82	14.91	49.70	≤75% % of AQAL	Negligible			
E3	Humber Estuary SPA, SAC, Ramsar, SSSI 3	0.17	0.58	14.82	14.99	49.98	≤75% % of AQAL	Negligible			
E4	Humber Estuary SPA, SAC, Ramsar, SSSI 4	0.24	0.80	14.78	15.02	50.07	≤75% % of AQAL	Negligible			
E5	Humber Estuary SPA, SAC, Ramsar, SSSI 5	0.23	0.76	16.60	16.83	56.09	≤75% % of AQAL	Negligible			

The percentage change in long-term process concentrations relative to the AQAL as a result of the proposed development at all ecological receptor locations, with respect to  $NO_x$  (as  $NO_2$ ) exposure, are determined to be 0.80% or less. The significance is to be 'negligible' for all ecological receptor locations, based on the methodology outlined in Section 3.

As the percentage change in long-term process concentrations relative to the AQAL is below 1% of the relevant critical level for the protection of vegetation and Ecosystems, the long-term process contributions have been screened out against the relevant standard/critical level. The nitrogen deposition assessment has not been undertaken.

Furthermore, Guidance of "A guide to the assessment of air quality impacts on designated nature conservation sites, May 2020, states that:

"5.5.2.3 In March 2015. AQTAG (Air quality Technical Advisory Group) clarified to the planning inspectorate that 'for installations other than intensive pig and poultry farms, AQTAG is confident that a process contribution (PC, as predicted by H1 or a detailed dispersion model) <1% of the relevant critical level or load (CL) can be considered inconsequential and does not need to be included in an in-combination assessment".

Therefore, in-combination habitat assessment (cumulative habitat assessment including other proposed development) does not need to be undertaken.

In summary, the  $NO_2$  impacts from the proposed development are insignificant on all ecological receptors for Scenario 2.

# 8.0 CUMULATIVE IMPACT ASSESSMETN RESULTS FOR THE PROTECTION HUMAN HEALTH

Cumulative impact assessment for the protection human health has been undertaken by assessing the adjacent industrial points sources, including Transwaste's biomass boilers and Energy Recovery Facility.

Following emission sources have been included in the cumulative assessment:

- (1) 41 Orlan Super 130 kWth biomass boilers proposed by Eco-Powers and 41 boilers are in operations;
- (2) Three Kalvis 0.95  $MW_{th}$  biomass boilers operated by Transwaste Ltd; and
- (3) Two emission flues at Energy Recovery Facility (ERF) operated by HRS Energy.

All predicted concentrations using 2017 and 2018 met data (the year resulting in maximum long-term and short-term PC concentrations from Eco-Power biomass boiler operations respectively) have been compared to the relevant environmental assessment criteria, as detailed in Sections 2 and 3.

# 8.1 NITROGEN DIOXIDE (NO<sub>2</sub>) – CUMULATIVE ASSESSMENT

#### Long-Term (Annual Mean) NO<sub>2</sub> – Cumulative Assessment

Predicted long-term (annual mean) PCs and PECs of NO<sub>2</sub> concentrations were assessed against the relevant AQO using 2017 met data (the year resulting in maximum long-term PC concentration from Eco-Power biomass boiler operations). The results of the model predictions at each discrete receptor, inclusive of background, are summarised in *Table 8-1*.

The impact description of changes associated with the operations of the all emission sources with respect to annual mean NO<sub>2</sub> exposure has been assessed with reference to the criteria in Section 3. The outcomes of the assessment are summarised in *Table 8-1*.

#### Gibson Lane, Hull, HU14 3HH

Table 8-1. Long-Term (Annual Mear	) Concentrations of NO <sub>2</sub> and Impact Description of Effects at Receptors – Cumulative Assessment

	-		Predicte	d Annu	al Mean C	Concentration (	ug/m³) – 2017 Me	t Data, and NO <sub>2</sub>	Impact Descrip	otion at Receptor	s
	Receptors	Process	Contributio	n (PC) (j	ug/m³)	T- (-) DO	Background		Total PEC	DE0	
ID	Name	Eco- Power Boilers	Three Kalvis Boilers	ERF	Total	Total PC as percentage of AQO (%)	from the Traffic assessment	Total PEC (PC +Background)	as percentage of AQO	PEC as percentage of AQO	Impact Descriptor
D1	100 Gibson Lane South	1.44	0.86	0.27	2.57	6.41	11.27	13.84	34.6%	$\leq$ 75 of AQO	Slight
D2	88 Gibson Lane South	1.09	0.66	0.35	2.10	5.25	11.27	13.38	33.4%	$\leq$ 75 of AQO	Negligible
D3	54 Gibson Lane	0.54	0.29	0.39	1.22	3.05	14.84	16.06	40.1%	$\leq$ 75 of AQO	Negligible
D4	The Coach House, Melton Grange, Main Road	0.39	0.24	0.38	1.01	2.54	14.84	15.85	39.6%	$\leq$ 75 of AQO	Negligible
D5	21 Brickyard Lane	0.42	0.27	0.38	1.06	2.65	14.84	15.90	39.7%	$\leq$ 75 of AQO	Negligible
D6	25 the triangle, North Ferriby	0.38	0.27	0.40	1.05	2.62	12.09	13.14	32.8%	$\leq$ 75 of AQO	Negligible
D7	Lowcroft Farm, Lowfield Lane	0.29	0.11	0.15	0.55	1.37	14.55	15.10	37.7%	$\leq$ 75 of AQO	Negligible
D8	South Hunsley School, 41 East Dale Road	0.27	0.14	0.15	0.56	1.41	14.55	15.11	37.8%	$\leq$ 75 of AQO	Negligible
D9	62 Common Lane	0.11	0.06	0.10	0.27	0.67	13.26	13.53	33.8%	$\leq$ 75 of AQO	Negligible
D10	79 Plantation Drive	0.27	0.20	0.28	0.75	1.88	14.84	15.59	39.0%	$\leq$ 75 of AQO	Negligible
D11	75 Southfield Drive	0.22	0.26	0.33	0.81	2.04	12.09	12.90	32.3%	$\leq$ 75 of AQO	Negligible
D12	87 Riverview Avenue <sup>a</sup>	0.31	0.29	0.38	0.98	2.45	14.84	15.82	39.5%	$\leq$ 75 of AQO	Negligible
D13	29 Marine Avenue	0.30	0.26	0.36	0.92	2.31	14.84	15.76	39.4%	$\leq$ 75 of AQO	Negligible
D14	12 Plantation Drive	0.35	0.22	0.35	0.92	2.30	14.84	15.76	39.4%	$\leq$ 75 of AQO	Negligible
D15	66 Plantation Drive	0.31	0.21	0.30	0.82	2.05	14.84	15.66	39.1%	$\leq$ 75 of AQO	Negligible
D16	10 Ashdale Park	0.27	0.20	0.27	0.73	1.83	14.84	15.57	38.9%	$\leq$ 75 of AQO	Negligible
	AQO							40 µg/m³			

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

The predicted cumulative long-term NO<sub>2</sub> PECs at selected receptor locations are below the relevant long-term AQS of 40  $\mu$ g/m<sup>3</sup> for the protection of human health.

The percentage changes in process contribution of NO<sub>2</sub> relative to the AQAL as a result of the emission emissions at all receptor locations, with respect to NO<sub>2</sub> exposure, are determined to be 6.41% or less. The impact is determined to be 'slight' at one receptor and to be 'negligible' at remaining receptors, based on the methodology outlined in Section 3. The effect of the proposed boiler operations on the local area is considered to be insignificant.

The predicted cumulative long-term NO<sub>2</sub> concentrations from the proposed development are considered acceptable for the protection of human health.

### Short-Term (1-Hour Mean) NO<sub>2</sub> – Cumulative Assessment

The short-term cumulative NO<sub>2</sub> PEC concentrations have been calculated at each of the discrete receptors listed for the worst meteorological year of 2018 and these results are detailed in Table 8.2.

### Gibson Lane, Hull, HU14 3HH

	Receptors		Predi	cted 1-hour l	Mean (99.79 <sup>th</sup> Pe	rcentile) Concentrati	on (µg/m³) – 2018 M	et Data	
		Proce	ess Contributi	on (PC) (µg	/m³)	7 / 150	Background		T ( 1850
ID	Name	Eco-Power Boilers	Three Kalvis Boilers	ERF	Total	Total PC as percentage of AQO (%)	from the Traffic assessment	Total PEC (PC +Background)	Total PEC as percentage of AQO
D1	100 Gibson Lane South	23.42	13.60	4.04	41.06	20.53	22.55	63.61	31.80
D2	88 Gibson Lane South	18.06	10.90	4.54	33.50	16.75	22.55	56.05	28.03
D3	54 Gibson Lane	11.75	4.06	4.13	19.94	9.97	29.67	49.62	24.81
D4	The Coach House, Melton Grange, Main Road	8.98	4.31	3.82	17.11	8.55	29.67	46.78	23.39
D5	21 Brickyard Lane	11.09	4.00	3.86	18.95	9.47	29.67	48.62	24.31
D6	25 the triangle, North Ferriby	7.47	3.42	2.82	13.72	6.86	24.18	37.90	18.95
D7	Lowcroft Farm, Lowfield Lane	14.81	2.87	4.16	21.84	10.92	29.10	50.94	25.47
D8	South Hunsley School, 41 East Dale Road	9.71	4.17	3.47	17.35	8.68	29.10	46.46	23.23
D9	62 Common Lane	6.46	3.96	2.50	12.92	6.46	26.52	39.44	19.72
D10	79 Plantation Drive	5.10	3.85	2.74	11.68	5.84	29.67	41.36	20.68
D11	75 Southfield Drive	6.05	3.43	2.63	12.11	6.06	24.18	36.29	18.15
D12	87 Riverview Avenue <sup>a</sup>	7.55	3.28	2.93	13.75	6.88	29.67	43.43	21.71
D13	29 Marine Avenue	6.74	2.99	2.90	12.63	6.31	29.67	42.30	21.15
D14	12 Plantation Drive	8.01	3.25	2.82	14.08	7.04	29.67	43.75	21.88
D15	66 Plantation Drive	7.85	3.46	2.72	14.03	7.02	29.67	43.71	21.85
D16	10 Ashdale Park	7.07	3.95	2.79	13.81	6.91	29.67	43.49	21.74
	AQO					200 µg/m³			

Note:

The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

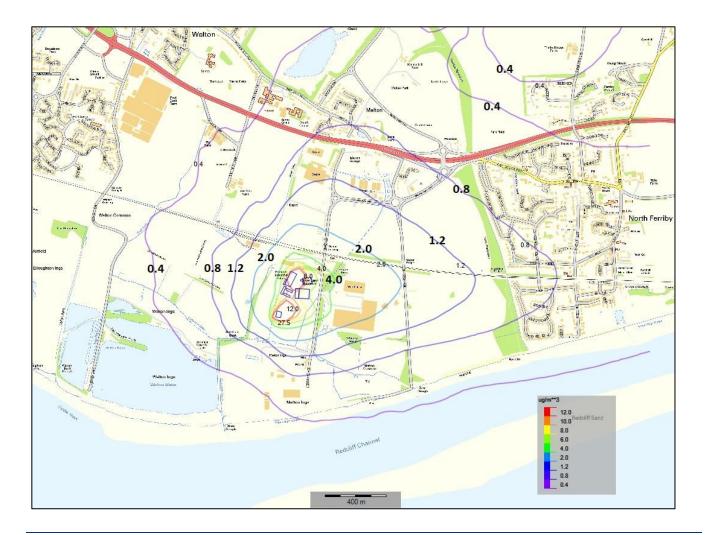
As shown in Table 8.2 there are no exceedances of the short-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted cumulative impacts are significantly below the AQO of 200  $\mu$ g/m<sup>3</sup>.

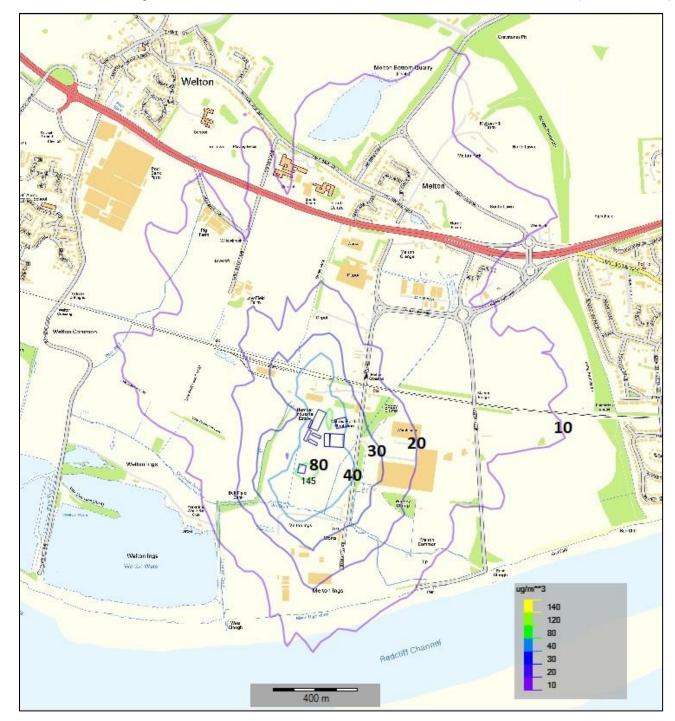
Therefore, the predicted cumulative short-term NO<sub>2</sub> concentrations from the cumulative emission sources are considered acceptable for the protection of human health.

The contour plots of the predicted cumulative long-term and short-term ground level PCs of NO<sub>2</sub> for all receptors, including discrete and grid receptors are presented in **Figure 8-1** and **Error! Reference source not found.**. The contour plots show that the predicted maximum concentrations occur adjacent to the emission source, with a predicted decrease in concentration with the increased distance from the stack.

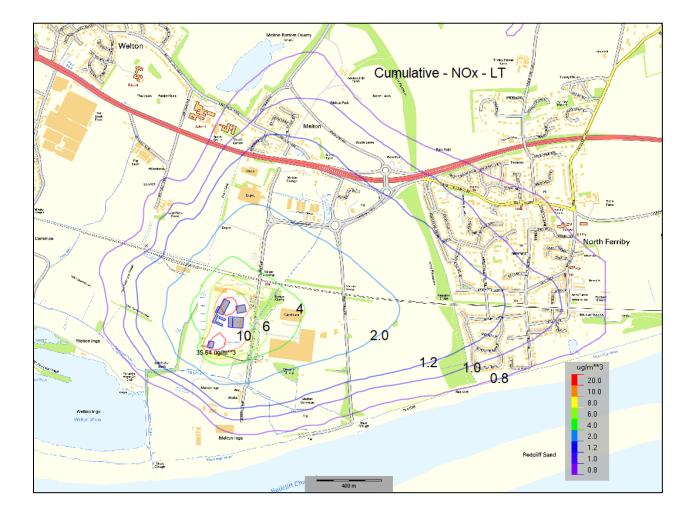
The contour plots of the predicted long-term ground level PCs of NO<sub>x</sub> and 24-hr NO<sub>x</sub> for all receptors, including discrete and grid receptors for the cumulative assessment are presented in *Figure 8-3* and *Figure 8-4*.

**Figure 8-1** Predicted Long-Term NO<sub>2</sub> Concentrations (PC) from the Cumulative Assessment – Including Emissions from Eco-Power Boilers, Transwaste Kalvis Boilers and ERF (2017 Met Data)



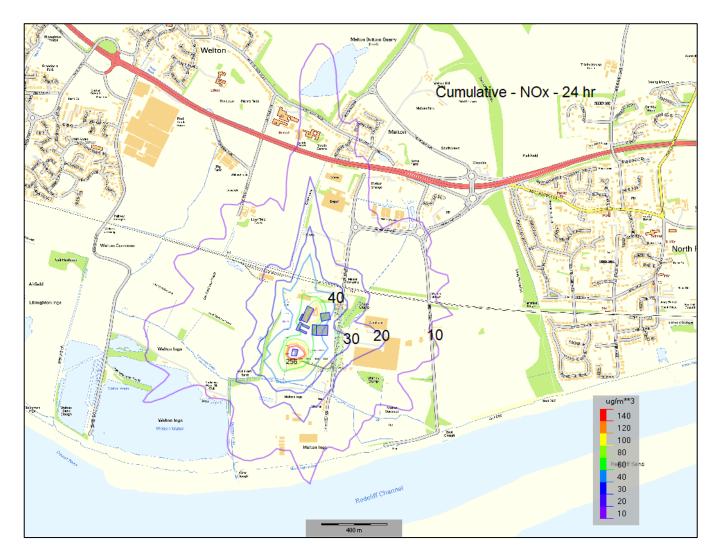


**Figure 8-2** Predicted Short-Term NO<sub>2</sub> Concentrations (PC, 1-Hour Mean, 99.79<sup>th</sup> Percentile) from the Cumulative Assessment – Including Emissions from Eco-Power Boilers, Transwaste Kalvis Boilers and ERF (2018 Met Data)



*Figure 8-3.* Predicted Ground level Long-Term NO<sub>x</sub> Concentrations (PC) for the Cumulative Assessment – Including Emissions from Eco-Power Boilers, Transwaste Kalvis Boilers and ERF (2017 Met Data)

*Figure 8-4.* Predicted Ground level Short-Term (24 hr) NO<sub>x</sub> Concentrations (PC) for the Cumulative Assessment – Including Emissions from Eco-Power Boilers, Transwaste Kalvis Boilers and ERF (2018 Met Data)



### 8.2 PARTICULATE MATTER (PM<sub>10</sub>) – CUMULATIVE ASSESSMENT

### Long-Term (Annual Mean) PM<sub>10</sub>– Cumulative Assessment

The predicted long-term cumulative PCs and PECs from 2017 meteorological data, the year resulting in maximum long-term NO<sub>2</sub> PC concentration from Eco-Power biomass boiler operations, at receptor locations are compared against the relevant AQS, in Table 8.3.

			Predicte	d Annua	al Mean C	oncentration (µ	ıg/m³) – 2017 Met	Data, and PM <sub>10</sub>	Impact Descri	ption at Receptor	s
	Receptors	Process Contribution (PC) (µg/m <sup>3</sup> )				Background	l.	Total PEC	550		
ID	Name	Eco- Power Boilers	Three Kalvis Boilers	ERF	Total	Total PC as percentage of AQO (%)	from the Traffic assessment	Total PEC (PC +Background)	as percentage of AQO	PEC as percentage of AQO	Impact Descriptor
D1	100 Gibson Lane South	0.56	0.25	0.03	0.84	2.09	13.78	14.61	36.5%	$\leq$ 75 of AQO	Negligible
D2	88 Gibson Lane South	0.43	0.19	0.04	0.65	1.63	13.78	14.43	36.1%	$\leq$ 75 of AQO	Negligible
D3	54 Gibson Lane	0.21	0.08	0.04	0.34	0.84	15.08	15.42	38.6%	$\leq$ 75 of AQO	Negligible
D4	The Coach House, Melton Grange, Main Road	0.15	0.07	0.04	0.26	0.66	15.08	15.35	38.4%	$\leq$ 75 of AQO	Negligible
D5	21 Brickyard Lane	0.16	0.08	0.04	0.28	0.70	15.08	15.36	38.4%	$\leq$ 75 of AQO	Negligible
D6	25 the triangle, North Ferriby	0.15	0.08	0.04	0.27	0.67	13.52	13.79	34.5%	$\leq$ 75 of AQO	Negligible
D7	Lowcroft Farm, Lowfield Lane	0.11	0.03	0.02	0.16	0.40	15.73	15.89	39.7%	$\leq$ 75 of AQO	Negligible
D8	South Hunsley School, 41 East Dale Road	0.11	0.04	0.02	0.16	0.41	15.73	15.89	39.7%	$\leq$ 75 of AQO	Negligible
D9	62 Common Lane	0.04	0.02	0.01	0.07	0.17	14.72	14.79	37.0%	$\leq$ 75 of AQO	Negligible
D10	79 Plantation Drive	0.11	0.06	0.03	0.19	0.49	15.08	15.28	38.2%	$\leq$ 75 of AQO	Negligible
D11	75 Southfield Drive	0.09	0.07	0.04	0.20	0.49	13.52	13.71	34.3%	$\leq$ 75 of AQO	Negligible
D12	87 Riverview Avenue <sup>a</sup>	0.12	0.08	0.04	0.24	0.61	15.08	15.33	38.3%	$\leq$ 75 of AQO	Negligible
D13	29 Marine Avenue	0.12	0.07	0.04	0.23	0.58	15.08	15.31	38.3%	$\leq$ 75 of AQO	Negligible
D14	12 Plantation Drive	0.14	0.06	0.04	0.24	0.59	15.08	15.32	38.3%	$\leq$ 75 of AQO	Negligible
D15	66 Plantation Drive	0.12	0.06	0.03	0.21	0.54	15.08	15.30	38.2%	$\leq$ 75 of AQO	Negligible
D16	10 Ashdale Park	0.10	0.06	0.03	0.19	0.47	15.08	15.27	38.2%	$\leq$ 75 of AQO	Negligible
	AQO				40 μg/m³						

Table 8-3. The Long-Term (Annual Mean) Concentrations of PM<sub>10</sub> and Impact Description of Effects at Receptors – Cumulative Assessment

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

As shown in Table 8.3, there are no exceedances of the long-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted cumulative impacts are significantly below the AQO of 40  $\mu$ g/m<sup>3</sup>.

The percentage change in process concentrations relative to the AQAL as a result of the cumulative emission sources at all receptor locations, with respect to  $PM_{10}$  exposure, are determined to be 2.09% or less. The significance is determined to be 'negligible', based on the methodology outlined in Section 3.

Therefore, the predicted cumulative long-term PM<sub>10</sub> concentrations from the Site are considered acceptable for the protection of human health.

#### Short-Term (24-Hour Mean) PM<sub>10</sub> – Cumulative Assessment

The predicted short-term PCs and PECs from 2018 meteorological data, the year resulting in maximum short-term NO<sub>2</sub> PC concentration from Eco-Power biomass boiler operations, at receptor locations are compared against the relevant AQS, in Table 8.4.

		F	Predicted 24-H	lour Mean (	90.41 <sup>th</sup> Percenti	le) Concentration (µ	g/m³) – 2018 Met Da	ata at Receptor	S		
	Receptors	Proce	ess Contributi	ion (PC) (µg	/m³)	7 ( 170	Background		T ( 1850		
ID	Name	Eco-Power Boilers	Three Kalvis Boilers	ERF	Total	<ul> <li>Total PC as</li> <li>percentage of</li> <li>AQO (%)</li> </ul>	from the Traffic assessment	Total PEC (PC +Background)	Total PEC as percentage of AQO		
D1	100 Gibson Lane South	2.41	0.69	0.09	3.19	6.38	13.78	16.96	33.93		
D2	88 Gibson Lane South	1.79	0.58	0.11	2.48	4.96	13.78	16.25	32.51		
D3	54 Gibson Lane	0.92	0.22	0.11	1.26	2.52	15.08	16.34	32.69		
D4	The Coach House, Melton Grange, Main Road	0.70	0.22	0.12	1.04	2.07	15.08	16.12	32.24		
D5	21 Brickyard Lane	0.68	0.19	0.13	0.99	1.99	15.08	16.08	32.16		
D6	25 the triangle, North Ferriby	0.57	0.15	0.10	0.82	1.64	13.52	14.33	28.67		
D7	Lowcroft Farm, Lowfield Lane	0.56	0.10	0.06	0.73	1.45	15.73	16.46	32.91		
D8	South Hunsley School, 41 East Dale Road	0.57	0.14	0.05	0.76	1.52	15.73	16.49	32.98		
D9	62 Common Lane	0.34	0.07	0.05	0.46	0.92	14.72	15.18	30.36		
D10	79 Plantation Drive	0.45	0.15	0.08	0.68	1.35	15.08	15.76	31.52		
D11	75 Southfield Drive	0.44	0.17	0.08	0.68	1.36	13.52	14.20	28.40		
D12	87 Riverview Avenue <sup>a</sup>	0.55	0.17	0.10	0.81	1.63	15.08	15.90	31.79		
D13	29 Marine Avenue	0.49	0.15	0.09	0.73	1.47	15.08	15.82	31.63		
D14	12 Plantation Drive	0.55	0.14	0.09	0.77	1.55	15.08	15.86	31.71		
D15	66 Plantation Drive	0.47	0.15	0.09	0.72	1.43	15.08	15.80	31.60		
D16	10 Ashdale Park	0.46	0.14	0.08	0.68	1.35	15.08	15.76	31.52		
	AQO					50 μg/m³					

#### *Table 8-4* The Short-Term (24-Hour Mean) Concentrations of PM<sub>10</sub> at Key Receptors – Cumulative Assessment

Note:

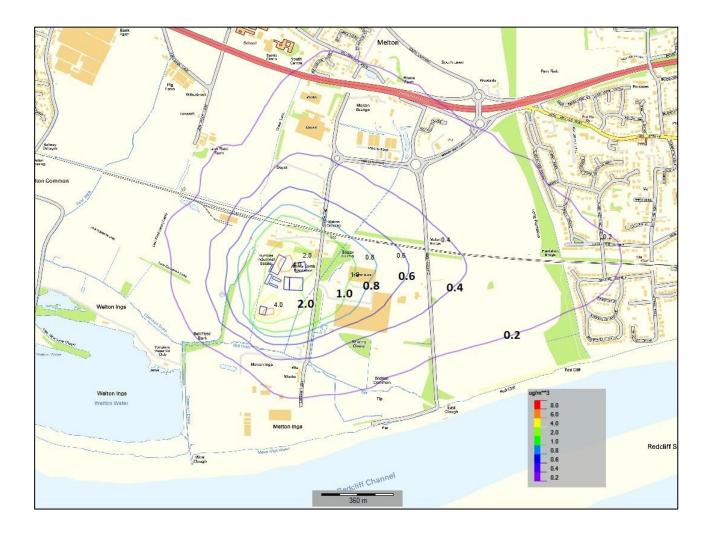
The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

As shown in Table 8.4, there are no exceedances of the short-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted cumulative impacts are significantly below the AQO of 50  $\mu$ g/m<sup>3</sup>.

Therefore, the predicted cumulative short-term  $PM_{10}$  concentrations from the all source emissions are considered acceptable for the protection of human health.

The contour plots of the predicted cumulative long-term ground level PCs of PM<sub>10</sub> for all receptors, including discrete and grid receptors are presented in **Figure 8-5**. The contour plots show that the predicted maximum concentrations occur adjacent to the emission source, with a predicted decrease in concentration with the increased distance from the stack.

**Figure 8-5** Predicted Long-Term PM<sub>10</sub> Concentrations (PC) from the Cumulative Assessment – Including Emissions from Eco-Power Boilers, Transwaste Kalvis Boilers and ERF (2017 Met Data)



The contour plots of the predicted cumulative short-term ground level PCs of PM<sub>10</sub> for all receptors, including discrete and grid receptors are not presented as the cumulative PCs are well below 10% of relevant AQO.

### 8.3 PARTICULATE MATTER (PM<sub>2.5</sub>) – CUMULATIVE ASSESSMENT

A worst-case scenario assumption of 100% of  $PM_{10}$  to be  $PM_{2.5}$  has been made in the cumulative assessment. The predicted long-term PCs of  $PM_{2.5}$  and the significance of changes associated with the operations of the all sources considered with respect to annual mean  $PM_{2.5}$  exposure has been presented and assessed in *Table 8-5*.

			Predicted	d Annua	l Mean Co	oncentration (µ	g/m³) – 2017 Met	Data, and PM <sub>12</sub>	₅ Impact Descri	ption at Recepto	rs
	Receptors	Process Contribution (PC) (µg/m <sup>3</sup> )			T-(-) DO	Background		Total PEC	<b>DEO</b>		
ID	Name	Eco- Power Boilers	Three Kalvis Boilers	ERF	Total	Total PC as percentage of AQO (%)	from the Traffic assessment	Total PEC (PC +Background)	as percentage of AQO	PEC as percentage of AQO	Impact Descriptor
D1	100 Gibson Lane South	0.56	0.25	0.03	0.84	3.35	8.85	9.68	38.7%	$\leq$ 75 of AQO	Negligible
D2	88 Gibson Lane South	0.43	0.19	0.04	0.65	2.61	8.85	9.50	38.0%	$\leq$ 75 of AQO	Negligible
D3	54 Gibson Lane	0.21	0.08	0.04	0.34	1.35	9.63	9.96	39.9%	$\leq$ 75 of AQO	Negligible
D4	The Coach House, Melton Grange, Main Road	0.15	0.07	0.04	0.26	1.05	9.63	9.89	39.6%	$\leq$ 75 of AQO	Negligible
D5	21 Brickyard Lane	0.16	0.08	0.04	0.28	1.12	9.63	9.91	39.6%	$\leq$ 75 of AQO	Negligible
D6	25 the triangle, North Ferriby	0.15	0.08	0.04	0.27	1.08	8.91	9.18	36.7%	$\leq$ 75 of AQO	Negligible
D7	Lowcroft Farm, Lowfield Lane	0.11	0.03	0.02	0.16	0.64	9.91	10.07	40.3%	$\leq$ 75 of AQO	Negligible
D8	South Hunsley School, 41 East Dale Road	0.11	0.04	0.02	0.16	0.65	9.91	10.08	40.3%	$\leq$ 75 of AQO	Negligible
D9	62 Common Lane	0.04	0.02	0.01	0.07	0.28	9.49	9.56	38.2%	$\leq$ 75 of AQO	Negligible
D10	79 Plantation Drive	0.11	0.06	0.03	0.19	0.78	9.63	9.82	39.3%	$\leq$ 75 of AQO	Negligible
D11	75 Southfield Drive	0.09	0.07	0.04	0.20	0.79	8.91	9.11	36.4%	$\leq$ 75 of AQO	Negligible
D12	87 Riverview Avenue <sup>a</sup>	0.12	0.08	0.04	0.24	0.98	9.63	9.87	39.5%	$\leq$ 75 of AQO	Negligible
D13	29 Marine Avenue	0.12	0.07	0.04	0.23	0.93	9.63	9.86	39.4%	$\leq$ 75 of AQO	Negligible
D14	12 Plantation Drive	0.14	0.06	0.04	0.24	0.95	9.63	9.86	39.5%	$\leq$ 75 of AQO	Negligible
D15	66 Plantation Drive	0.12	0.06	0.03	0.21	0.86	9.63	9.84	39.4%	$\leq$ 75 of AQO	Negligible
D16	10 Ashdale Park	0.10	0.06	0.03	0.19	0.76	9.63	9.82	39.3%	$\leq$ 75 of AQO	Negligible
	AQO				25 μg/m³						

Table 8-5. The Long-Term (Annual Mean) Concentrations of PM<sub>2.5</sub> and Impact Description of Effects at Receptors – Cumulative Assessment

Note:

(a) The background data for receptors D12 to D16 are assumed to be the same as receptor D10 for a worst-case assessment.

As shown in Table 8.5, there are no exceedances of the short-term NO<sub>2</sub> AQO at any of the identified sensitive receptors. The predicted impacts are significantly below the AQO of  $25 \,\mu g/m^3$ .

The percentage change in process concentrations relative to the AQAL as a result of the boiler operations at all receptor locations, with respect to  $PM_{2.5}$  exposure, are determined to be 3.35% or less. The significance is determined to be 'negligible', based on the methodology outlined in Section 3.

Therefore, the predicted cumulative long-term PM<sub>2.5</sub> concentrations from the all emission sources considered are considered acceptable for the protection of human health.

### 8.4 CARBON MONOXIDE (CO) – CUMULATIVE ASSESSMENT

Predicted ground level short-term (8-hour running mean) CO concentrations were assessed against the relevant AQO using 2018 met data (the year resulting in maximum short-term PC concentration). The results of the model predictions at each discrete receptor, inclusive of background, are summarised in *Table 8-6*.

	Receptors		Predicted Max	imum 8-hou	ur Running	Mean Concentr	ation (µg/m	1 <sup>3</sup> )
ID	Name	Eco- Power Boilers	Process Contr Three Kalvis Boilers	ib'tn (PC) ERF	Total	Process Contribution (PC) (μg/m <sup>3</sup> )	PC as %age of AQO	PEC (a) (PC + Background) (μg/m³)
D1	100 Gibson Lane South	463.15	78.61	39.52	581.29	5.81	715.29	463.15
D2	88 Gibson Lane South	363.95	50.39	46.68	461.02	4.61	595.02	363.95
D3	54 Gibson Lane	233.91	23.75	50.75	308.41	3.08	442.41	233.91
D4	The Coach House, Melton Grange, Main Road	173.35	23.04	39.68	236.07	2.36	370.07	173.35
D5	21 Brickyard Lane	122.24	18.62	47.84	188.70	1.89	322.70	122.24
D6	25 the triangle, North Ferriby	155.24	23.98	28.97	208.19	2.08	342.19	155.24
D7	Lowcroft Farm, Lowfield Lane	181.31	14.02	61.03	256.36	2.56	390.36	181.31
D8	South Hunsley School, 41 East Dale Road	145.01	25.00	35.82	205.82	2.06	339.82	145.01
D9	62 Common Lane	93.30	21.77	47.38	162.44	1.62	296.44	93.30
D10	79 Plantation Drive	72.91	20.48	28.74	122.12	1.22	256.12	72.91
D11	75 Southfield Drive	78.65	18.95	29.56	127.16	1.27	261.16	78.65
D12	87 Riverview Avenue	109.63	16.55	30.29	156.48	1.56	290.48	109.63
D13	29 Marine Avenue	116.60	14.69	24.36	155.65	1.56	289.65	116.60
D14	12 Plantation Drive	148.69	13.60	28.80	191.09	1.91	325.09	148.69
D15	66 Plantation Drive	112.39	17.19	28.40	157.98	1.58	291.98	112.39

Table 8-6. Summary of Predicted CO Concentrations - Cumulative Assessment

Gibson Lane, Hull, HU14 3HH

D16	10 Ashdale Park	125.76	12.26	23.48	161.51	1.62	295.51	125.76
AQOs	10000							
Note:								

<sup>(a)</sup> Inclusive of Background concentration of 134µg/m<sup>3</sup>

The maximum predicted cumulative 8-hour running mean CO process contributions (PC) at receptors is 581.29µg/m<sup>3</sup> when using 2018 met data. The predicted cumulative 8-hour running mean PCs of CO at the modelled discrete receptors are well below 5.81% of the short-term AQO, which are considered insignificant.

The maximum cumulative PEC of 8-hour running mean CO emissions is 715.29  $\mu$ g /m<sup>3</sup>, which does not exceed the relevant short-term AQS of 10000  $\mu$ g/m<sup>3</sup>. Therefore, the cumulative short-term PECs of CO at all receptors are below the relevant short-term AQS of 10000  $\mu$ g/m<sup>3</sup> for the protection of human health.

# 8.5 SHORT-TERM NO<sub>2</sub> – CUMULATIVE ASSESSMENT INCLUDING LEVEL CROSSING TRAFFIC

Investigations of the potential increase of the short-term impact on receptors from level crossing related waiting traffic has been undertaken.

Mr Philip Hill, Senior Environmental Control Officer of Yorkshire Council has reviewed the first issue of this air quality assessment report. Mr Hill has contacted to WYG with comments of additional studies of the potential increased short-term impact from the waiting traffic at the level crossing at Gibson Lane on the residential receptors.

Additional air quality modelling has been used to determine the pollutant levels from the waiting traffic at the level crossing.

The waiting traffic emissions have been modelled by assuming a worst-case total of 22 HGVs being idle on both side of the railway line on Gibson Lane.

The idle traffic NO<sub>x</sub> emissions have been based on following data:

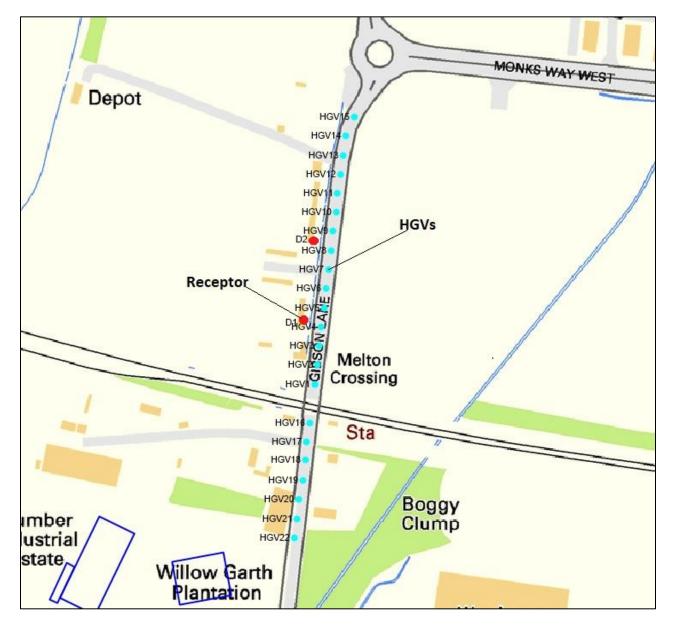
- (1) Number of HGV's: 22;
- (2) Length for HGV's: 17m;
- (3) Idle diesel car NO<sub>x</sub> emission rate: 4.5 g/hr <sup>a;</sup>
- (4) A diesel car fuel consumption: 0.65 litter/hr;
- (5) Idle diesel HGV NOx emission rate: 13.86 g/hr;

Note:

(a) Source: "Road tunnels: vehicle emissions and air demand for ventilation", Technical committee D.5 Road Tunnels, 2019R02EN.

The HGV emission source locations and the receptor locations are presented in *Figure 8-6* below:





### Short-Term (1-Hour Mean) NO<sub>2</sub> – Cumulative Assessment including the Waiting Traffic

The predicted short-term NO<sub>2</sub> PC from the waiting traffic are 17.09  $\mu$ g/m<sup>3</sup> and 22.34  $\mu$ g/m<sup>3</sup> at 100 Gibson Lone South (R1) and at 88 Gibson Lane South (R2) respectively.

The total of the predicted cumulative short-term NO<sub>2</sub> PEC, including (1) the waiting traffic (2) Eco-Power boiler, (3) three Kalvis boilers, (4) Two emission flues at the ERF, and (5) the background (including normal traffic emissions), at 100 Gibson Lone South (R1) and at 88 Gibson Lane South (R2) is presented in *Table 8-7*.

	Pocontors		Predicted Maximum 8-hour Running Mean Concentration (µg/m³)								
Receptors		Process Contrib'tn (PC)						Background		550	
ID	Name	Waiting Traffic	Eco- Power Boilers	Three Kalvis Boilers	ERF	Total	PC as %age of AQO	from the Traffic assessment	PEC <sup>(a)</sup> (PC +Background)	PEC as percentage of AQO	
D1	100 Gibson Lane South	17.09	19.70	13.60	4.04	54.43	27.22	22.55	76.98	38.49	
D2	88 Gibson Lane South	22.34	16.65	10.90	4.54	54.43	27.22	22.55	76.98	38.49	
AQOs		200 µg/m <sup>3</sup>									

### Table 8-7. Summary of the Predicted Short-Term NO2 Concentrations at Discrete Receptors including the waiting Traffic

Note:

(a) Inclusive of Background concentrations from the traffic assessment.

As shown in Table 8.7, there are no exceedances of the short-term NO<sub>2</sub> AQO at 100 Gibson Lone South (R1) and at 88 Gibson Lane South (R2). The predicted cumulative impacts including the waiting traffic contributions are significantly below the AQO of 200  $\mu$ g/m<sup>3</sup>.

# 9.0 ODOUR ASSESSMENT FOR DRYING FLOOR AND BOILER OPERATINON

### 9.1 PROCESS DESCRIPTIONS

The Perry Belt Drier (drying floor) is ideally suited to drying almost any non-flowing product or more granular products that require a lower throughput capacity. Popular applications have included waste materials, such as woodchip.

Air is drawn down through the product bed/waste materials which keeps the product tight to the belt, improving drying efficiency & reducing product loss through fans via product lift.

The proposed dryer has a throughput capacity of 14.8 tonnes per hour on SRF 100kg/m<sup>3</sup> (dry output 13,300 kg per hour). The overall drying section length is 33 m.

There are 6 heat exchanger units and each unit has a heated air volume of approximately 50,000 m<sup>3</sup>/hr. It is proposed to install 13 emission stacks to disperse the exhausted air volumes. Definition of Odour Impact and Effect

Following major regulations/guidance/guidelines have been used in the assessment:

- Guidance on the assessment of odour for planning, IAQM, July 2018; and
- H4 Odour Management, How to comply with your environmental permit, March 2011.

IEMA Guidelines for Environmental Impact Assessment (2004) recommend a clear progression from the characterisation of "impact" to the assessment of the significance of the "effect" taking into account the evaluation of the sensitivity and value of the receptors. The guidelines emphasise the need to clearly define at the outset how the two terms will be used and then to apply them in a consistent fashion. In this IAQM guidance, the following definitions are used:

- Impacts these are changes to the environment attributable to the development proposal.
- Effects these are the results of the changes on specific receptors.
- Receptors are the users of the adjacent land, which may vary in their sensitivity to odour.

An increase in odour levels (the impact) would therefore cause a particular effect (e.g. loss of amenity) if the adjacent land use was residential, and perhaps a lesser effect if the adjacent land use was an industrial facility.

### 9.2 ODOUR BENCHMARKS

Environment Agency Guidance H4 Odour Management (March 2011) and the latest Institute of Air Quality Management (IAQM) Guidance on the Assessment of Odour for Planning (July 2018) provides a methodology for assessing the impacts of odour based on the combinations of field odour survey observations and odour dispersion modelling.

The modelling method (if used) calculates the 98<sup>th</sup> percentile of hourly average odour concentrations (C<sub>98, 1-hour</sub>) over a year, (i.e. the levels exceeded for 2% of the time) with the results being expressed as European Odour Unit contours on a map. The exposure contours can then be used to check unacceptable levels of odour pollution against exposure benchmarks at sensitive receptor locations.

The H4 benchmarks are based on the 98<sup>th</sup> percentile of hourly averages and they are presented in Table 9.1.

Criterion C <sub>98</sub> ou <sub>E</sub> /m <sup>3</sup>	Offensiveness	Odour Emission Sources
1.5	Most offensive odours	Processes involving decaying animal or fish remains Processes involving septic effluent or sludge Biological landfill odours
3.0	Moderately offensive odours	Intensive livestock rearing Fat frying (food processing) Sugar beet processing Well aerated green waste composting
6.0	Less offensive odours	Brewery Confectionery Coffee

#### Table 9-1 H4 Benchmark Odour Criteria

The latest IAQM guidance states that the predictive, quantitative approach involves obtaining estimates of the odour source emission rate, use of the emissions in a dispersion model to predict 98th percentile concentration at sensitive receptors and comparison of these with criteria that have evolved from research and survey work. At the present time, this remains an accepted technique and the IAQM supports this.

IAQM confirm that in the absence of comprehensive dose-response information the assessor should allow the derivation of exact C98 concentration metrics for different types of odour, IAQM is 'of the opinion that the practitioner should observe, from the various scientific studies, case law and practical examples of the investigation of odour

annoyance cases, that in any specific case, an appropriate criterion could lie somewhere in the range of 1 to 10 ouE/m<sup>3</sup> as a 98th percentile of hourly mean odour concentrations.

Taking into account the available scientific evidence and the collective experience of IAQM members involved in drafting this guidance, the odour concentration change descriptors together with impact descriptors in Table 9.2 are proposed by IAQM for an odour at the offensive end of the spectrum. These adopt the C98 as the appropriate frequency metric, encompasses the 1 to 10 ouE/m<sup>3</sup> concentration range referred to above and also considers also the potential sensitivity of different receptors. It is also consistent in format and concept with other guidance in the air quality field.

For odours that are less unpleasant, the level of odour exposure required to elicit the same effect may be somewhat higher, requiring professional judgement to be applied. For example, odours from sewage treatment works plant operating normally, i.e. non-septic conditions, would not be expected to be at the 'most offensive' end of the spectrum (Table 9.1) and can be considered on par with 'moderately offensive' odours such as intensive livestock rearing. Table 9.3 below shows the impact descriptors proposed for a 'moderately offensive' odour.'

	Receptor Sensitivity							
Odour Exposure Level C <sub>98</sub> , ou <sub>E</sub> ∕m³	Low	Medium	High					
٤10	Moderate	Substantial	Substantial					
5-<10	Moderate	Moderate	Substantial					
3-<5	Slight	Moderate	Moderate					
1.5-+3	Negligible	Slight	Moderate					
0.5-<1.5	Negligible	Negligible	Slight					
<0.5	Negligible	Negligible	Negligible					

Table 9-2 Proposed odour effect descriptors for impacts predicted by modelling - "Most Offensive "odours

It should be noted that the Table applies equally to cases where there are increases and decreases in odour exposure as a result of this development, in which case the appropriate terms "adverse" or "beneficial "should be added to the descriptors.

	Receptor Sensitivity							
Odour Exposure Level C <sub>98</sub> , ou <sub>E</sub> ∕m³	Low	Medium	High					
2 <b>10</b>	Moderate	Substantial	Substantial					
5-<10	Slight	Moderate	Moderate					
3-<5	Negligible	Slight	Moderate					
1.5-<3	Negligible	Negligible	Slight					
0.5-<1.5	Negligible	Negligible	Negligible					
<0.5	Negligible	Negligible	Negligible					

*Table 9-3* Proposed odour effect descriptors for impacts predicted by modelling - "Moderately Offensive" odours

It should be noted that the Table applies equally to cases where there are increases and decreases in odour exposure as a result of this development, in which case the appropriate terms "adverse" or "beneficial "should be added to the descriptors.

A benchmark odour criterion of 3.0 OUe/m<sup>3</sup> for moderately offensive odours has been used in this assessment.

### 9.3 ODOUR EMISSION SOURCES

### 9.3.1 Odour Emission from Drying Floor

The odour emissions from drying floor activities have been assessed by using 13 odour point sources within the model.

For odour emission rate estimations, it is assumed that odour will be continuously emitted from the waste on the drying belt and odour concentrations at the exhaust air after heat exchanger is  $212 \text{ OU}_{\text{E}}/\text{m}^3$ , which is equivalent to the odour outlet concentrations for biofilters treating biowaste odour (sniffer report: Understanding biofilter performance and determining emission concentration under operation conditions, Final Report – project Number ER36, June 2014).

The odour emissions used within AERMOD and stack gas parameters are presented in Table 9.4.

Parameter	Drying Belt and Odour Emissions	Unit		
Belt Width	3	m		
Overall Drying Section length	33	m		
No. of Heat Exchanger Units	6	-		
Heated Air Volume per Unit	50,000	m³/hr		
Total Heated Air Volume for 6 Units	300,000	m³/hr		
No. of Stacks	13	-		
Exhaust Air Volume per Stack	6.41	m³/s		
Exhaust Air Temperature	60	C°		
Odour concentration in Exhaust Air <sup>a</sup>	500	OU <sub>E</sub> /m <sup>3</sup>		
Odour Emission Rate per Stack	3,205	OU <sub>E</sub> /s		
Total Odour Emission Rate from 13 Stacks	3,205 x 13 = 41,667	OU <sub>E</sub> /s		
Stack Diameter	1.0	m		
Stack velocity	8.16	m/s		
Stack Height	13.15	m		

### Table 9-4 Odour Emissions from Drying Floor for the Assessment and Stack Parameters

Note:

(a) Sniffer report: Understanding biofilter performance and determining emission concentration under operation conditions, Final Report – project Number ER36, June 2014.

A total odour emissions of 41,667 OUE/s from 13 exhaust stacks has been used in modelling for the assessment.

### 9.3.2 Odour Emissions from Wood Fuelled Boilers Stacks

Odour emissions from 41 Orlan Super 130 kWh biomass boiler operations have been assessed.

The odour emissions from the wood fuelled boilers have been derived from information on the paper "Odor, gaseous and  $PM_{10}$  emissions from small scale combustion of wood types indigenous to Central Europe, by Magdalena Kistler, May 2012. The average odour concentration of hardwood smoke is 2,087  $OU_E/m^3$  and the average odour concentration of softwood smoke is 3,036  $OU_E/m^3$ . The odour concentration of softwood smoke of 3,036  $OU_E/m^3$  has been used in the assessment.

The odour mass emission rates used within AERMOD and stack gas parameters are presented in Table 9-5.

Table 9-5. Orlan Super 130 kWth Biomass Boiler Stack Odour Emissions and Stack Parameters

Parameter	Angus Orlan Super 130 kW Boiler (each boiler)	Unit
Number of Boiler	41	-
Fuel Consumptions	24.5 °	kg/hr
Fuel Humidity	15 ª	%
CV (Net, Dry basis)	19.1 <sup>b</sup>	MJ/kg
Dry Flue gas Volume at 10% of $O_2$	479 <sup>b</sup>	m³/MJ
Stack Gas Temperature	160 ª	°C
Stack Volumetric Flow Rate at 10% $O_2$ and 0 $C^\circ$	190.5	m³/hr
Odour concentration	3036	OU <sub>E</sub> /m <sup>3</sup>
Odour emission rate	578,358	OU <sub>E</sub> /hr
Odour emission rate	160.7	OU <sub>E</sub> /s
Stack Oxygen content	6.1°	%
Stack moisture content	15 <sup>d</sup>	%
Modelled stack diameter	0.2 °	m
Stack velocity	6.4 <sup>e</sup>	m/s
Stack Height	12.5	m

Notes: Note:

e. (a) Orlan Super 130 kWth Biomass Boiler Instruction Manual and technical data;

(b) Derived from the AEA report of "Conversion of biomass boiler emission concentration data for comparison with renewable heat incentive emission criteria", Ref: AEA/ED46626/AEA/R/3296, May 2012;

(c) Data from the Test Report of 32 – 0119, 31/10/2011;

(d) GLA air quality report of Biomass and CHP Emission standards, March 2013; and

(e) Stack diameter and efflux velocity (after applications of exodraft fan to increase the velocity).

### 9.4 ODOUR ASSESSMETN RECEPTORS

In addition to the selected receptors of 25 the Triangle, North Ferriby (D6), 79 Plantation Drive (D10) and 75 Southfield Drive (D11), five additional receptors in the North Ferriby have been added to the list of sensitive receptors for the odour assessment.

Table 9-6. Modelled Sensitive Receptors for Odour Assessment

0% 15			UK NGR (m)
Site ID	Discrete Sensitive Receptor	Х	Y
D1	100 Gibson Lane South	496955	425795
D2	88 Gibson Lane South	496966	425882
D3	54 Gibson Lane	497015	426249
D4	The Coach House, Melton Grange, Main Road	497209	426365
D5	21 Brickyard Lane	497442	426144
D6	25 the triangle, North Ferriby	498166	425622
D7	Lowcroft Farm, Lowfield Lane	496343	426287
D8	South Hunsley School, 41 East Dale Road	496689	426616
D9	62 Common Lane	495613	426302
D10	79 Plantation Drive	497983	426212
D11	75 Southfield Drive	498268	425278
D12	87 Riverview Avenue	498219	425426
D13	29 Marine Avenue	498340	425491
D14	12 Plantation Drive	498106	425838
D15	66 Plantation Drive	498019	426081
D16	10 Ashdale Park	498243	426085

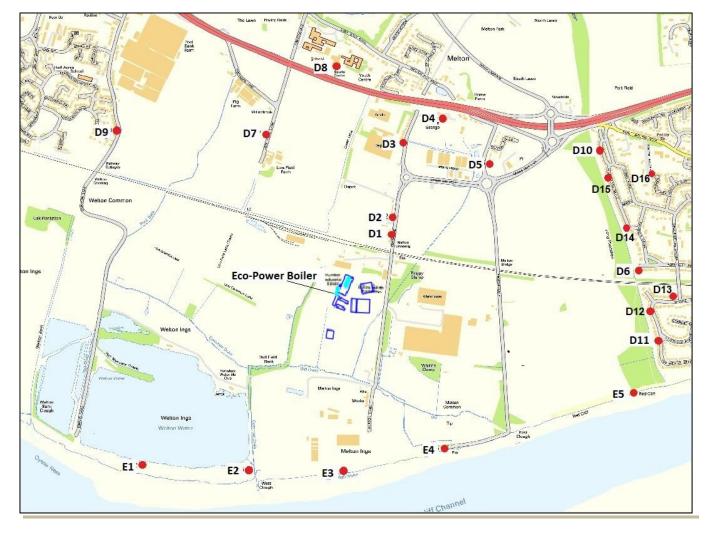


Figure 9-1. Sensitive Receptor Locations for Odour Assessment

The detailed computational modelling assessment of odour impact was undertaken using the input parameters detailed in Section 9.3.

All predicted odour concentrations have been compared to the relevant environmental assessment criteria, as detailed in Section 9.2.

The results of the model predictions at each discrete receptor using three met data are summarised in *Table 9-7*. The results are presented at the 98<sup>th</sup>%ile of hourly averages (Environment Agency, March 2011).

		Predicted Hourly PEC OU <sub>E</sub> /m³			
Site ID	Discrete Sensitive Receptor	2016 Met Data	2017 Met Data	2018 Met Data	
D1	100 Gibson Lane South	2.04	2.52	2.41	
D2	88 Gibson Lane South	1.71	2.03	2.08	
D3	54 Gibson Lane	0.72	1.16	1.09	
D4	The Coach House, Melton Grange, Main Road	0.47	0.76	0.69	
D5	21 Brickyard Lane	0.51	0.69	0.62	
D6	25 the triangle, North Ferriby	0.39	0.59	0.59	
D7	Lowcroft Farm, Lowfield Lane	0.21	0.35	0.34	
D8	South Hunsley School, 41 East Dale Road	0.31	0.29	0.25	
D9	62 Common Lane	0.08	0.11	0.14	
D10	79 Plantation Drive	0.31	0.47	0.40	
D11	75 Southfield Drive	0.27	0.38	0.32	
D12	87 Riverview Avenue	0.34	0.48	0.44	
D13	29 Marine Avenue	0.33	0.52	0.46	
D14	12 Plantation Drive	0.40	0.56	0.54	
D15	66 Plantation Drive	0.35	0.53	0.37	
D16	10 Ashdale Park	0.30	0.44	0.32	

Table 9-7. The 98th %ile Maximum Short-Term (Hourly) Concentrations of Odour

Notes:

1 There is no background for odour and hence the PC = PEC.

The odour emissions from the sources considered were assessed for all 3 years of meteorological data. The results indicate that the maximum predicted odour concentration at sensitive/residential receptors using three years of meteorological data is  $2.52 \text{ OU}_{\text{E}}/\text{m}^3$ , which occurs along on 100 Gibson Lane South and does not exceed the 3.0  $\text{OU}_{\text{E}}/\text{m}^3$  assessment level at the 98<sup>th</sup> %ile.

### **Odour Effects on the Receptors**

The magnitudes of odour effects on receptors for 2017, the year resulting in maximum total short-term odour concentrations, are presented in *Table 9-8*.

The residential dwellings are assessed as high sensitivity receptors.

Site	Discrete Sensitive Receptor	Predicted Hourly PEC OU <sub>E</sub> /m <sup>3</sup>	Odour Effect on High Sensitive Receptors
ID		2017 Met Data	2017 Met Data
D1	100 Gibson Lane South	2.52	Slight
D2	88 Gibson Lane South	2.03	Slight
D3	54 Gibson Lane	1.16	Negligible
D4	The Coach House, Melton Grange, Main Road	0.76	Negligible
D5	21 Brickyard Lane	0.69	Negligible
D6	25 the triangle, North Ferriby	0.59	Negligible
D7	Lowcroft Farm, Lowfield Lane	0.35	Negligible
D8	South Hunsley School, 41 East Dale Road	0.29	Negligible
D9	62 Common Lane	0.11	Negligible
D10	79 Plantation Drive	0.47	Negligible
D11	75 Southfield Drive	0.38	Negligible
D12	87 Riverview Avenue	0.48	Negligible
D13	29 Marine Avenue	0.52	Negligible
D14	12 Plantation Drive	0.56	Negligible
D15	66 Plantation Drive	0.53	Negligible
D16	10 Ashdale Park	0.44	Negligible

Table 9-8. Modelled Sensitive Receptors for Odour Assessment

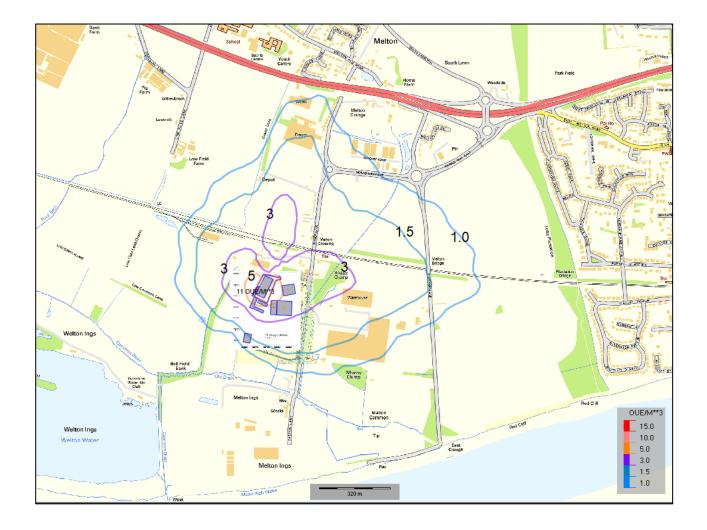
The results indicate that the predicted odour concentrations at the existing residential receptors using 2017 meteorological data range from  $0.44OU_{E}/m^{3}$  to  $2.52 OU_{E}/m^{3}$ .

The odour effects at the receptors are predicted to be 'Slight' to 'Negligible'.

Therefore, the predicted short-term odour emissions from the Site are considered acceptable.

From the meteorological dataset, the year resulting in maximum odour concentration was identified as 2017. The contour plot of the predicted odour concentrations using 2017 meteorological data both inside and outside the site boundary is presented in **Figure 9-2**.

Figure 9-2 shows that the predicted maximum concentrations occur adjacent to the northern boundary of the composting pad area, with a predicted decrease in concentration with the increased distance from the odour sources.





### 9.6 SENSITIVITY ANALYSIS - INTER-ANNUAL VARIABILITY

The short-term odour emissions from the modelled sources have been assessed for the 3 complete years of meteorological data. The model sensitivity to inter-annual variation of meteorological conditions was calculated by using the following equation:

In the above equation "mean" refers to the true mean for all of the concentrations calculated by the model at all discrete receptors and grid receptors. Results are shown for short-term odour PC in *Table 9-9*.

### Table 9-9. Sensitivity Analysis

Descurator	3 '			
Parameter	2016 Met Data	2017 Met Data	2018 Met Data	% Variation
Short-term Odour PC (OU <sub>E</sub> /m <sup>3</sup> )	0.598	0.616	0.646	3.85

The sensitivity analysis indicates that for the emissions of odour and all 3 years of meteorological data the percentage variations were 3.85%.

### **10.0 ODOUR COMPLAINT RECORDS**

### **10.1 COMPLAINT RECORDS**

The last five year's odour complaint occurred within 2 km of the site have been obtained from the Environment Agency. Each of the recorded odour complaint from the 19<sup>th</sup> February 2016 to the 17<sup>th</sup> January 2021 has been investigated according to the time of complaint, the distance to the site, wind direction, weather conditions, characteristic of the smell, and intensity of the odour.

The details of recorded complaints are presented in Table B1 in Appendix B.

Table 10-1 shows the monthly complaints from February 2016 to January 2021.

Month / Year	2016	2017	2018	2019	2020	2021
January	N/A	0	0	5	12	1
February	1	0	0	3	3	N/A
March	0	2	0	4	1	N/A
April	0	0	0	0	2	N/A
Мау	1	1	0	2	5	N/A
June	1	1	0	4	1	N/A
July	0	0	0	8	15	N/A
August	0	2	0	86	8	N/A
September	9	1	0	22	10	N/A
October	0	2	7	10	1	N/A
November	1	0	4	3	7	N/A
December	0	1	0	8	0	N/A
Total	13	10	11	155	65	1

*Table 10-1* Complaints by Months and Years

It can be seen that there are total 255 complaints recorded between February 2016 and January 2021.

The number of complaints remain low and consistence between 2016 to 2018 with an average of 11 complaints per year.

There was a big jump of complaint number in 2019, especially in August 2019. There were over 80 complaints in August along. The complaint numbers reduced in 2020 but are considered to be high compared with the year between 2016 to 2018.

Analyses of the information of "Description of Smell", it can be found that most complaint odours/smells are related to the rotting waste/four odour/rubbish tip odour/rotting household refuge/decomposing material. As the waste drying plant will be drying the waste such as, waste wood, paper and plastic, but not having any food waste and household waste, it is unlikely that those odour complaints are related to the Eco-Power's waste drying plant operations.

Further analyses of the information of "Description of Smell" indicated that there was a total of 24 complaints relate to "smoke smell". Those complaints occurred between the 5<sup>th</sup> August 2019 and the 17<sup>th</sup> January 2021 and are presented in Table B2 in Appendix B. However, the Eco-Power has confirmed that when those complaints occurred the boilers were not in the operations and those complaints were unlikely related to Eco-Power's boiler operations.

The updated odour details the procedures to undertake a substantiated complaint, for example, reviewing the site activities, the daily odour diary log, wind direction, descriptions of the smell at the site boundary (if applicable).

### **11.0 CONCLUSIONS**

Eco-Power Environmental Limited commissioned Tetra Tech (formerly WYG) to update an air quality assessment to meet the EA's schedule 5 request of "Notice of request for more information". The air quality assessment assessed the impact from 41 proposed Orlan Super 130 kW Biomass boilers at Waste Drying Plant, at Gibson Lane, Melton, Hull, HU14 3HH.

### Eco-Power's Biomass Boiler Emission Impact Assessment

The predicted long-term and short-term NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO, concentrations from the emissions of the operation of the proposed Orlan Super 130 kW Biomass boilers are all below the relevant AQOs for the protection of human health.

The significance of effects on the emissions on the ground level receptors from the boiler operations with respect to long-term NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> is determined to be 'negligible'.

#### Habitat Assessment

The annual mean and daily (24 hour mean) NO<sub>x</sub> PEC at the ecological receptors from Eco-Power's boiler operations are below the relevant critical level for the protection of vegetation and Ecosystems. the NO<sub>x</sub> impacts from the proposed development on the ecological receptors are insignificant.

The process contribution (PC, as predicted by the detailed dispersion model) from Eco-Power biomass boiler operations is <1% of the relevant critical level or load (CL) and it can be considered inconsequential. It does not need to be included in an in-combination (cumulative) habitat assessment.

### Cumulative Impact Assessment for the Protection of Human Health

Cumulative impact assessment for the protection of human health has been undertaken including the emission sources adjacent to Eco-Power biomass boilers and the emission sources in the cumulative assessment include:

- (1) 41 Orlan Super 130 kWth biomass boilers proposed by Eco-Powers;
- (2) Three Kalvis 0.95 MWth biomass boilers operated by Transwaste Ltd; and
- (3) Two emission flues at Energy Recovery Facility (ERF) operated by HRS Energy.

The predicted cumulative long-term and short-term NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and CO, concentrations from the cumulative emission source considered are all below the relevant AQOs for the protection of human health.

The significance of cumulative effects on the emissions on the ground level receptors from the emission source considered with respect to long-term  $NO_2$ ,  $PM_{10}$  and  $PM_{2.5}$  is determined to be 'negligible'.

### **Odour Impact Assessment from Biomass Boilers and Drying Floor Operations**

The odour emissions from the 41 biomass boilers and a Perry Belt Drier (drying floor) operations were assessed and the maximum predicted odour concentration at sensitive/residential receptors is below the odour benchmark. The odour effects from the site operations on the sensitive receptors are insignificant. The odour management plan has been updated in a separate stand-along document.

The proposed development is not considered to be contrary to any of the national and local planning policies.

## APPENDIX A BASELINE TRAFFIC AIR QUALITY MODELLING

### Traffic Air Quality ADMS Model Inputs

The traffic air quality modelling assessment has utilised:

- ADMS-Roads 5.0;
- Backgrounds determined from the non-Modelled Roadside Contribution;
- 2018 Leconfield Meteorological Data;
- Emissions Factor Toolkit (v10.1, August 2020);
- $NO_x$  to  $NO_2$  calculator (v8.1,); and,
- 2018 AADT Traffic Data downloaded from the Department for Transport.

The inputs for the traffic model are as follows in Tables

### *Table A 11-1* and *Table A 11-2*.

The traffic data has been utilised to assess the corresponding receptors within the assessment. These are outlined in

#### Table A 11-1.

Air quality assessment areas, including ADMS road sources and receptor locations are presented in Figure A1.

#### Table A 11-1. Traffic Data

1 to b		2018		
Link	Speed (km/h)	AADT	HGV %	
The Manorway (South of Site)	48	585	18.35	
The Manorway (West of Site)	80	2,338	18.35	
The Manorway (West of Springhouse Road)	80	2,338	18.35	
The Manorway (West of London Gateway Drive)	80	10,314	10.54	
Stanford Road	48	11,966	7.55	
A13 Stanford-le-Hope Bypass	112	61,467	6.08	
B1420 Church road	48	7,160	0.80	

### Table A 11-2. ADMS Roads Model Inputs.

Parameter	Description	Input Value
Chemistry	A facility within ADMS-Roads to calculate the chemical reactions in the atmosphere between Nitric Oxide (NO), NO <sub>2</sub> , Ozone (O <sub>3</sub> ) and Volatile organic compounds (VOCs).	No atmospheric chemistry parameters included
Meteorology	Representative meteorological data from a local source	Leconfield, hourly sequential data
Surface Roughness	A setting to define the surface roughness of the model area based upon its location.	<b>0.5m</b> representing a typical surface roughness for <b>Parkland, open suburbia</b>
Latitude	Allows the location of the model area to be set	United Kingdom = <b>51.51</b>
Monin-Obukhov Length	This allows a measure of the stability of the atmosphere within the model area to be specified depending upon its character.	Mixed Urban / Industrial= <b>30m.</b>
Elevation of Road	Allows the height of the road link above ground level to be specified.	All road links were set at ground level = <b>0m</b> .
Road Width	Allows the width of the road link to be specified.	Road width used depended on data obtained from OS map data for the specific road link
Topography	This enables complex terrain data to be included within the model in order to account for turbulence and plume spread effects of topography	No topographical information used
Time Varied Emissions	This enables daily, weekly or monthly variations in emissions to be applied to road sources	No time varied emissions used
Road Type	Allows the effect of different types of roads to be assessed.	Urban (Not London) settings were used for the relevant links
Road Speeds	Enables individual road speeds to be added for each road link	Based on national speed limits
Canyon Height	Allows the model to take account turbulent flow patterns occurring inside a street with relatively tall buildings on both sides, known as a "street canyon".	No canyons used within the model
Road Source Emissions	Road source emission rates are calculated from traffic flow data using the in-built EFT database of traffic emission factors.	The <b>EFT</b> Version <b>10.0 (2020)</b> dataset was used.
Year	Predicted EFT emissions rates depend on the year of emission.	<b>2018</b> data for verification and baseline operational phase assessment

### Table A 11-3. Modelled Existing Sensitive Receptor Locations

Discrete Sensitive Receptors				
AERMOD ID /ADMS ID	Name	Height (m)		

Great Garlands Farm	1.5
Old Garlands Farm	1.5
3-4 Ainsworth Cottages	1.5
School House, Herd Lane	1.5
1 Ship Cottages, Wharf Road	1.5
Whitehall Farm	1.5
16 Merricks Lane,	1.5
88 Brackendale Avenue	1.5
Rookery Farm	1.5
Northwick Farm	1.5
7 Koln Close	1.5
6 Haven Quays	1.5
	Old Garlands Farm 3-4 Ainsworth Cottages School House, Herd Lane 1 Ship Cottages, Wharf Road Whitehall Farm 16 Merricks Lane, 88 Brackendale Avenue Rookery Farm Northwick Farm 7 Koln Close

This data has been input into the ADMS Roads 4.1 model and the model has been verified to local monitoring data.

Table A 11-4. Comparison of Roadside Modelling & Monitoring Results for NO2

Tube leastice	NO₂ µg/m³				
Tube location	Monitored NO <sub>2</sub>	Modelled NO <sub>2</sub>	Difference (%)		
ТКЗ	29.28	26.59	-9.18		
PKSL	29.35	31.81	8.38		

The final verified model has produced output at the monitoring locations being within 10% of the monitoring results, as recommended by TG16 guidance.

The final verification model correlation coefficient (representing the model uncertainty) is 1.00<sup>2</sup>. This figure demonstrates that the model predictions were in line with the road traffic emissions at the monitoring locations.

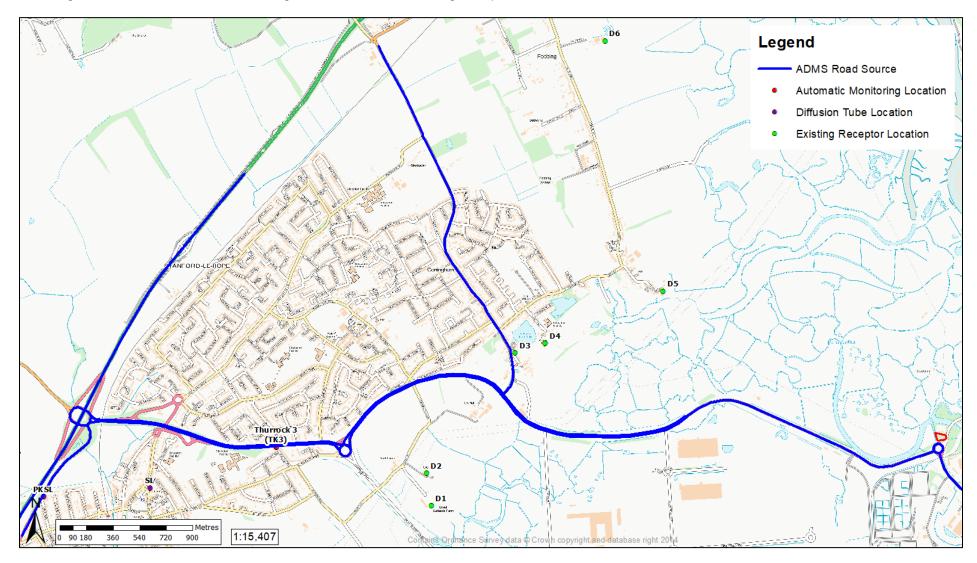
The modelled baseline concentrations of NO2 are outlined in

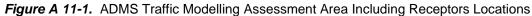
### Table A 11-5.

 $<sup>^{2}</sup>$  This was achieved by applying a model correction factor of 1.50 to roadside predicted NO<sub>X</sub> concentrations before converting to NO<sub>2</sub>.

Discrete Ser	nsitive Receptors	Modelled Baseline (2018) Pollutant Concentrations (µg/m³)
AERMOD ID /ADMS ID	Name	NO <sub>2</sub>
D1	Great Garlands Farm	15.84
D2	Old Garlands Farm	15.89
D3	3-4 Ainsworth Cottages	17.93
D4	School House, Herd Lane	15.50
D5	1 Ship Cottages, Wharf Road	15.34
D6	Whitehall Farm	14.94
D7	16 Merricks Lane,	15.75
D8	88 Brackendale Avenue	14.83
D9	Rookery Farm	14.43
D10	Northwick Farm	15.36
D11	7 Koln Close	17.79
D12	6 Haven Quays	17.00

Table A 11-5. Predicted 2018 Annual Average Concent	rations of NO <sub>2</sub>
---	----------------------------





# APPENDIX B EA SCHEDULE 5 LETTER

# Notice of request for more information The Environmental Permitting (England & Wales) Regulations 2016

Company Director

Eco-Power Environmental (Hull) Limited Bankwood Lane Industrial Estate Bankwood Lane Rossington Doncaster South Yorkshire DN11 0PS

Application number: EPR/MP3107PP/A001

The Environment Agency, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit duly made on 21st October 2020.

Send the information to either the email or postal address below by 19/03/2021. If we do not receive this information by the date specified then we may treat your application as having been withdrawn or it may be refused. If this happens you may lose your application fee.

Email address: psc@environment-agency.gov.uk.

Postal address:

Permitting and Support Centre Quadrant 2 99 Parkway Avenue Parkway Business Park Sheffield S9 4WF

NameDateMatthew Woollin22/01/2021

Authorised on behalf of the Environment Agency

#### Notes

These notes do not form part of this notice.

Please note that we charge £1,200 where we have to send a third or subsequent information notice in relation to the same issue. We consider this to be the first notice on the issues covered in this notice.

#### **Fire Prevention Plan**

You must consider the 'Fire Prevention Plans: environmental permits' guidance (updated 09/01/2020) insert date of latest update on <u>GOV.UK</u>, hereafter referred to as the guidance, and come to your own view as to what proposals you consider will meet the objectives to:

- minimise the likelihood of a fire happening;
- aim for a fire to be extinguished within 4 hours; and
- minimise the spread of fire within the site and to neighboring sites.

You can follow the measures set out in the guidance and if you do so you will meet the objectives of the guidance and we are likely to approve your Fire Prevention Plan (FPP). If you do not include these measures you can propose alternative measures to meet the objectives. We will technically assess your alternative measures and, if we are satisfied that they meet the objectives, we can approve the FPP.

If your proposals do not meet the measures in the guidance, you should explain in detail the alternative measures you intend to take and how those measures can meet the objectives. This applies to each of the information requests in the attached schedule.

The notes in italics that appear after information requests in the attached schedule do not form part of the notice. The notes are intended to assist you in providing a full response

# Schedule

Fire Prevention Plan

Adequate answers to the following are required for the FPP to pass assessment:

- Provide details which show you have considered and mitigated for materials on site which are not covered by the guidance but still pose a fire risk (e.g. combustible liquids or hazardous materials). This includes any gas cylinders, fuel tanks, aerosols and chemicals on site. These materials should be shown on the site plan and confirmed to be adequately separated from combustible wastes.
- Your FPP needs to ensure the fire prevention measures will be put in place and used on site. Provide details of regular training exercises on site to test how well your plan works and to ensure that staff understand all the requirements of it. This should include training in day-to-day operation (e.g. stockpile management), as well as incident response.
- 3. Your site plan is currently missing:
  - a. The location of fixed plant or where mobile plant is stored when not in use
- 4. Provide detail of security measures on site in relation to CCTV. The design, installation and maintenance must be covered by an appropriate <u>UKAS-accredited</u> third party certification scheme.
- 5. Confirm electrics on site will be fully certified by a qualified electrician and outline the written procedures in place that set out regular maintenance.
- 6. Confirm that a fire watch will monitor the site at regular intervals during the working day, to detect signs of a fire from hot exhausts or engines, and outline the regularity of these intervals.
- 7. Confirm and provide details of a quarantine area for hot loads.
- 8. Provide details of how external heating during hot weather will be taken into account and confirm that waste will be shaded from direct sunlight if required and/or any other techniques that will be in place to enable heat generated within the pile to be released.
- 9. Provide details which show that fire walls and bays are designed to resist fire (both radiative heat and flaming) and have a fire resistance period of at least 120 minutes to allow waste to be isolated. Fire walls must show compliance with all factors outlined in Section 11.2 of the guidance.
- 10. Provide details of the quarantine area(s) on site. The quarantine area(s) must be within the boundary of the site for which the permit applies and be large enough to hold at least 50% of the volume of the largest pile. The quarantine calculation assumes 6x10x4=240 cubic metres but waste would not be in a bay so more likely to be 120m, needs to be 224 cubic metres to meet the requirements. Confirm a separation distance of at least 6 metres around the quarantined waste will be in place.
- 11. Provide details of the detection system on site. The detection system should be proportionate to the nature and scale of waste management activities you carry out and the associated risks. For all automated systems the design, installation and maintenance should be covered by an appropriate UKAS-accredited third-party certification scheme. If the system is not accredited, provide details as to why not and outline how the system will work on site.Provide details of the suppression system on site, ensuring the design, installation and maintenance of all automated suppression equipment

is covered by an appropriate UKAS- accredited third-party certification scheme. If the system is not accredited, provide details as to why not and outline how the system will work on site.

- 12. Provide details of how you have designed your site to allow for active firefighting, outlining the procedures in place in the event of a fire.
- 13. Provide site specific calculations for water supply in accordance with the guidance. You need to account for a worst-case scenario, which is defined as your largest waste pile catching fire. As a guide, a water supply of at least 2,000 litres a minute for a minimum of 3 hours is needed to tackle a 300 cubic metre pile of combustible material (this equates to approximately 6.7 litres/minute for every 1m3 of material). Reference is made to 9000l/min of water being available from hydrants, but no information provided to justify this. Previous fires at this site have shown the hydrants have limited flow capacity.
- 14. Provide details of how incoming wastes will be diverted to alternative sites during a fire. You need to show a plan is in place for how you will notify those who may be affected by a fire, such as nearby residents and businesses. Provide details of how you will clear and decontaminate the site following a fire and the steps you will take before the site can become operational again.

Odour management plan (OMP)/Environmental Permitting Technical Requirements (odour only)

- 15. Add North Ferriby to the list of sensitive receptors.
- 16. Explain the reasoning behind the assumption made about the odour emission value for emissions from the drying process used in modelling impact.
- 17. Modelling should be re-run with a higher odour emission value.
- 18. Re-run the model to account for reduced benchmark due to a sensitised population.
- 19. Consider alternate odour monitoring location points, especially in the North Ferriby area.
- 20. Confirm the location and purposes of the monitoring locations on figure 2 of the OMP that appear to be within or on top of the building.
- 21. The OMP needs to consider the risk of odour generated by the operation of the wood fuelled boilers.
- 22. Revise the OMP review triggers to account for information provided by complaint investigation and actual impact of the proposed activity (especially use of wood fuelled boilers and drying line).
- 23. Provide detail as to how public engagement will be initiated and encouraged.
- 24. Provide indicative examples for how odour from the boilers or drying could be reduced if determined to be the source of odour.
- 25. Define what represents a substantiated complaint.

26. This application seeks to add a drying activity using wood fuelled appliances to provide heat. Please revise your best available techniques assessment (BAT assessment) to ensure that all the necessary procedures and operating techniques are updated to include the wood fuelled appliances and drying activity of the SRF. Please ensure that it addresses all the requirements of the Waste

Treatment BAT conclusions<sup>1</sup>. Namely; please revise BAT 10, 12 and 13 to ensure you have adequate monitoring and management of odours on the site with regards to emissions from the wood fuelled appliances and the drying of SRF.

Notes on OMP review/review of BAT in relation to odour

The proposed activity seeks to replace part of an existing permitted operation, there is a history of odour complaints relating to the existing site. The assessment of risk in the odour management plan (OMP) should take account of the complaints history, this is important when seeking to understand and model risk.

The sensitive receptor boundary is set at 1km from the site, this does not take account of North Ferriby; a village with a history of odour complaints, especially important for the north western side of the village which is down wind of the proposed activity for a significant proportion of time using the wind rose submitted in the OMP.

The proposed drying activity involves subjecting waste to a range of processes that are normally minimised in an effort to reduce odour. Such as shredding, heating and increasing the rate of evaporation. By doing this the output will be a gaseous stream that could be odorous. The modelling relies on an assumption that the odour rate emissions of the drying activity will be the same as that from a Biofilter (212 Odour units/cubic metre).

When modelling odour it is assumed that the odour will be moderately offensive when determining the benchmark level, as there is an already sensitised population then this should be accounted for and the benchmark reduced.

Two of the primary potential sources of odour will be the emission stacks from the boilers and drying plant. The proposed odour monitoring locations (Figure 2 OMP) are unlikely to monitor any odour from these as the emissions may not have fully mixed or reached ground level.

There are 2 distinct potentially odorous point source emissions:

- Emissions from wood fuelled appliances
- Emissions from drying of waste

These have distinct and different natures and risks i.e. emissions from waste drying will be moisture rich. In <u>Guidance for the Treatment and Transfer of Hazardous Waste and Non-</u><u>Hazardous Waste S5.06</u>, reference is made to the difficulty this raises with plume dispersion and recommends investigation of methods to reduce moisture content before discharge. Whereas emissions from the wood fuelled appliances will be dry, with the proposed fuelling arrangements in process controls of the appliances is hard to quantify in relation to minimising emissions (stop/start nature of fuelling and use). There is an inadequate investigation/explanation made in the OMP as to how odour from the 2 sources mentioned here could be reduced.

The OMP includes as assessment of predicted odour concentrations that includes the suggested contribution from the drying line. There is also predicted concentrations of certain emissions from

<sup>1</sup>Waste Treatment BAT Conclusion. https://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:32018D1147&from=EN

TETRA TECH

the wood fuelled boilers. This does not include a consideration of the odour from the heating appliances, given that combined thermal input for these are over 5MW of thermal capacity, fuelled by the manual loading of wood then there is a clear risk of the odour of smoke. This is supported by complaint history within the last few months which have shown a new pattern of complaints of a burning/wood smoke nature.

The plan of proposed monitoring locations includes 2 locations that appear to be either within the building or on top of the building.

The OMP includes a commitment to review after 12 months to ensure continued effectiveness. As the proposed activity includes a new process (wood fuelled boilers and drying line) then this is a long time to wait to review a plan.

Community liaison is described in a reactive manner depending on request to attend, given the complaint history active engagement is preferable.

Corrective measures are detailed in the report. No mention is made of measures that could be taken if emissions from use of wood fired boilers or the drying line are determined to be the source of the odour. Corrective measures are described as being considered following a substantiated complaint.

BAT requirements particularly of relevance being:

BAT 10; monitoring of odour in cases where an odour nuisance at sensitive receptors is expected and/or has been substantiated.

BAT 12; OMP to contain - an odour prevention and reduction programme designed to identify the source(s); to characterise the contributions of the sources; and to implement prevention and/or reduction measures.

BAT 13; In order to prevent or, where that is not practicable, to reduce odour emissions, BAT is to use one or a combination of the techniques given.

# APPENDIX C ODOUR COMPLAINT RECORDS

Table B1 consists of the recorded odour complaint from the 19<sup>th</sup> February 2016 to the 17<sup>th</sup> January 2021, a total of 255 recorded complaints.

Table B2 consists of the recorded odour complaints relate to "smoke smell", a total of 24 recorded complaints.

# Table B1. Complaints by Months and Years

	Ref No	Reported	Location	Notification Details	Description of Smell	Location: e.g., the site (HU14 3HH) is located SSE of the odour reporter.	Wind directions at the time of reported	Likely Sourc e from the site (HU14 3HH)? Y/N	Remarks
1	1412591	19/02/2016 15:07	Low Field Farm	Location: Melton, Hull	Yorks - Odour Location: Melton, Hull A caller is reporting an odour from Transwaste Recycling and Aggregate Ltd. The odour is putrid, like rotting waste. The odour was first noticed at 08:00am. The site is roughly 200 yards from the reporter. The odour was rated 6/6. The odour does enter the callers building with windows and doors shut. The weather has been mild with little wind.	SSE	sw		
2	1431910	04/05/2016 12:18	Low Field Farm	01904822648 ML on SR mobile	No answer@12.30, 12.51 & 12.59 01904822648 ML on SR mobile number@13.03 YORKS - Odour Complaint, Transwaste, Hull The reporter rang with regards to the odour from the above site. First noticed at 0900, rating it a four, the odour has grown in intensity through the morning and as of 1215 the odour is now a six. They described it as rotten garbage. They share a common boundary with the site and it has made one of their staff feel ill. The weather conditions are sunny with a little bit of a breeze.	SSE	S, SSW	Y	
3	1445451	20/06/2016 13:41	35, Brough	Caller reporting odour coming from	Yorks Oil Spill The caller is reporting that the occupant of 29 Swale road has a n oil leak in their car and has lost 5-6 loiterers of oil outside their house which is washing in the road drains. This has been happening since last Thursday, there is enough oil that they are tracking it into their house, and it washes down the drain. The caller doesn't know the name of the person involved	SE	sw		closest 1.4 km NW away
4	01467691 (M)	02/09/2016 10:32	Melton Hill		Yorks - Odour Caller reporting odour coming from Transwaste which is less than a mile from callers address. This has been ongoing for a couple of weeks now and almost everyday. Was originally speaking to Council who today advised them to ring EA.	S	S, SW	Y	approx. 1 km north

					Odour is described as old waste plant smell such as sweet putrid smell. Odour can come inside property when the windows are open.				
5	1469744	09/09/2016 13:23	Melton		Yorks Odour The reporter is affected at present with an odour from Transwaste. The site is 1 mile away from the reporter The weather is windy and sunny The score of the odour is 4/6 The doors and windows are open with the warm weather present The smell is constant at present. The smell is of the bottom of a bin at present. The smell is of the bottom of a bin at present. SR - CO. Wind direction is South Westerly so site is a potential source	S	S, SSW	Y	
6	01470292 (M)	12/09/2016 12:58	Melton Hill		YNE - Odour - Melton 1 of 2 Caller reporting Trans waste in Melton near Hull for the smell of waste/bins. Strength is about 5/6 and can be smelled inside. Weather is warm and dry with a tiny bit of breeze. Site is about a mile and a half away.	S	S	Y	
7	1470295	12/09/2016 13:00	Melton Hill		YNE - Odour - Melton - 2 of 2 Caller reporting Trans Waste in Melton near Hull for a smell of waste/bins. Strength was about 5/6 and could be smelled inside. Weather was humid and still. Site is about a mile and a half away.	S	S	Y	
8	01470453 (M)	12/09/2016 19:02	Melton	The reporter believes it Transwaste.	Yorks - Reporting the odour from what the reporter believes it Transwaste. It's stinks. Was bad on Friday but today it's horrendous. Had to close windows to keep the odour out. 6/6 Wind direction 180o (Southerly). Reported is downwind of the Transwaste site Worst reporter has ever smell.	S	S	Y	

					Weather - Warm and still.				
9	1470458	12/09/2016 19:13	Melton	Melton	Yorkshire - Odour - Transwaste, Melton The caller is reporting a foul odour from Transwaste It's coming into the house with windows open It's a horrible rotting smell It's boiling hot It's the next street along The caller first noticed It's a 16/6	S	S	Y	
10	1486622	22/11/2016 16:22	Melton		Yorkshire - Odour - Melton Odour from a waste site called Transwaste on Gibson Lane Smells like a rubbish tip which makes you feel sick Caller noticed this 2 hours ago Caller is on the next street to the site Rated at a 6 on the odour scale The smell is not in the house, windows and doors are closed The weather is cold and quite still	S	S	Y	
11	01505157 (M)	02/03/2017 08:30	Long Plantation	Transwaste recycling, Melton	02030258149 YORKS: Odour: Transwaste recycling, Melton Described; Rotting, methane smell. Claggy. Makes you feel sick. 1st Noticed: On opening the door at 8am. Located: 0.5 mile as the crow flies. Rated; 5/6 Unable to smell inside the house, doors and windows are closed. The odour does enter the house on opening the door. Weather: No wind, but the smell makes you retch	NW, W, SW	SW, W	Y	
12	1506296	07/03/2017 15:02	Unit 3a, NORTH FERRIBY	NIRS	Yorks-Odour - Please Pass Letter with NIRS Location-Gibson Lane-Melton-East Yorkshire Report via EMAIL from Gardner Aerospace Ltd of noxious odour emanating from Transwaste Site next door It can be smelled in the offices with windows and doors closed Odour described as a disgusting gas and methane smell It is so noxious it is affecting the employees both inside and outside the building	w	w, sw	Y	
13	1525113	23/05/2017 10:40	Low Field Farm		Yorks - Odour via email - Melton Transwaste EA/EPR/BP3792LD/V006	SSE	W, SW		

16	1550163	23/08/2017 14:21	North Ferriby	ODOUR: Caller reports the smell at	One number engaged @ 14.37 YNE: ODOUR: Caller reports the smell at the moment from Transwaste. This was noticed at 2pm. Smell is described as a "sickly manure" odour that rates as 6/6 at the moment. Smell is obvious inside the house which is about half a mile from the site. Weather conditions are wet and overcast but quite still. Caller states that the problem has not been too bad recently until today. Also wishes to add that there is a significant amount of litter on the A63 slip road toward Brough which blows from the lorries as they travel away from the site. Caller feels that this litter needs to be cleared as this has been the case for several months. Location: Derwent Avenue, North Ferriby, E Yorks.	w	W	Y	
15	1545191	03/08/2017 08:42	Aggregates Ltd	Melton. 1st report for AUG 2017.	<ul> <li>YOR- Odour Transwaste Gibson Lane Melton. 1st report for AUG 2017.</li> <li>'It has been reported to me this morning that there are odours allegedly from Trans Waste within our offices at Melton House.</li> <li>I do understand that you are constantly monitoring this and doing whatever you can to solve the issue. Thank you for your support.'</li> </ul>	S	S, SW	Y	Transwaste Gibson Lane, <b>Melton</b> , HU14 3HH
14	1532834	20/06/2017 17:00	East Clough		Yor - Odour - Trans-Waste, Melton Receive via email. 'Whilst taking a water sample today at Welton Waters I could smell something foul. It was a slightly sweet smell, level 3 out of 6 for offensiveness. It was noted that the site I was at is just west of Trans-Waste (Gibson Lane). '	SE	E, NE	Y	NEAR RIVER, end of brickyard lane
					<ul> <li>"We wish to register a complaint at the noisome smell that is becoming a regular occurrence in the area of our business activities.</li> <li>Origin are a pharmaceutical packaging company that relocated to a purpose built facility in 2008 on Jackson Way, Melton, HU14 3HJ.</li> <li>The arrival of Transwaste after we arrived (approximately quarter of a mile away from us) was noted with deep regret and we have become used to tolerating the regular discharge of their waste onto the roadway to and from the Melton business park. What we cannot bear however is the smell!</li> <li>The wind has been in a southerly direction today bringing putrid air directly into our warehouse. We assume such odour is from rotting food, the presence of so many seagulls (also a significant nuisance) would suggest food must be being processed at their site.</li> <li>Origin are required to operate to strict hygiene regulations in our course of business and it is lamentable that Transwaste appear to be permitted to operate with a complete disregard of the environment and those around them.</li> </ul>				

					Feedback Requested Please - 10 days advised.				
					Sglenville: Site notified via email at 16:49 hours, feedback requested				
					Chris Tute (TCM) reported back on 25/08/17 - information provided showing agricultural field between site and reporter has had land spreading activities on recently, believes odour is a result of this rather than attributable to site activities. 25/08/17 Reporter contacted at 10:26 on landline, no answer. 10:27 mobile number, message left to report any further odour reports				
					YOR - Odour - Transwaste, North Ferriby				
17	1553519	06/09/2017 11:35	Long Plantation	Ferriby	Caller is reporting Transwaste for the odour. This is a sickly odour smell, like the tip, horrible. This was first noticed at 11:10 when the caller returned home. This is now inside the house, it has come through the door. The site is about a mile away. The weather is still, drizzling, warm. Caller rates it 4/6 today.	NW, W, SW	w, sw	Y	
					SR - CO. Wind direction Easterly indicating site is possible source. Contacted site and asked for a report.				
18	1558841	02/10/2017 14:21	Transwaste	YORKS/DEBRI S & ODOUR	msg@ 14:39 & 14:54 02030258149 YORKS/DEBRIS & ODOUR Reporter is contacting the EA regarding Melton recycling site which is about 1.5 mile away has a smell on and off depends on what the site has in Usually smells about a 4 If the windows and doors closed then you can't smell anything but then you are unable to sit outside or open your windows. Initially phoned to complain about the vehicles that are	w	w	Y	
					transporting the waste along the main Station Road to the site that are not securely fastening down the waste and it is blowing all over the roads and streets, spoke with the council and police who said to phone the EA, advised the reporter that they should contact the council again.				
19	1564904	31/10/2017 11:18	Low Field Farm	problems of dust, insects and rodents	<ul> <li>YNE: ODOUR: Caller reports the problems of dust, insects and rodents all coming from Transwaste next door to his premises. Waste is packed down into open skips using heavy plant. This is taking place close to the perimeter fence. Cannot see exactly what is happening - not sue how long the waste is stored on site before being moved on. There is a large 360-degree excavator working on the site now.</li> <li>The dust leaves a deposit on all the cars and property in the area and forces staff to keep windows closed etc. There is an infestation of "gnats" - bigger than ants but smaller than flies which also get into the building. Rentokill have been brought in to deal with the problem of rats but caller has been told that the problem seems to be</li> </ul>	SSE	S, SW	Y	

-					Location: Gibson Lane, Melton, North Ferriby, Hull. Feedback Requested Please - 10 days advised.				
20	1574015	18/12/2017 14:00	Long Plantation		YOR - odour Location - North Ferriby Caller reports odour from Trans Waste recycling facility. Odour described as "sicky, methane, like a tip". Odour first noticed now. Site is 1 mile away. Odour getting inside the house with windows shut. Weather is sunny and still. Odour rated as 6.	NW, W, SW	w, sw	Y	
21	01654911 (M)	01/10/2018 17:26	Melton Hill		Yorks - Odour - North Ferriby Caller is reporting odour coming from Transwaste Odour described as a rotting vegetation smell Site is half a mile from caller property Odour rated between 4 / 5 This was noticed on 26.09.2018 Caller states the site also left their doors open on the 23.09.2018 which they're not allowed to do Caller states the breeze was coming from the direction of Transwaste	S	W, NW		Melton Hill Farm
22	1655310	03/10/2018 13:42	Long Plantation		York's odour Transwaste North Ferriby Caller reporting that they have just arrived home and the smell from Transwaste was at their home location, usual smell, caller lives about a mile, weather today cool but no wind about 15C Justin Jones (CO) checked wind conditions and although very still there was some gentle wind from a W direction so possible the odour could be from the site.	NW, W, SW	W, SW, S	Y	
23	1655391	03/10/2018 18:10	Melton Hill		YOR Odour Caller is reporting the odour from Transwaste described as stomach churning rotting food waste and rated 5/6. It was noticed at 13:00 but became stronger at 17:30. It is not inside the home with the windows and door closed. The caller is 1 mile and the weather is overcast, a little bit windy with a SW wind and the caller says the odour happens regularly but tonight it is particularly bad P MARRIS (EMDO) - checked weather conditions on wunderground WSW to SW over the affected period and up to 20kmh. substantiated and passed to EMTL Kerry Backen	S	sw	Y	
24	1656628	09/10/2018 16:00	Melton	- North Ferriby	YOR - Odour - Trans Waste Recycling - North Ferriby Gibson Lane Melton, North Ferriby Described as a sickly rotting vegetables First noticed at 07:00 this morning and still present This has been an issue since Sunday - direction of wind has a bearing Approx. 800m Rated at 6/6	S	sw	Y	

					Noticeable in property - with doors windows closed Wind is a Southerly - moderate prevailing breeze, warm and dry				
					Yesterday evening the site was working overnight with the shed doors opened				
25	1657269	12/10/2018 10:27	Long Plantation	Ferriby	YOR - Odour - Transwaste, North Ferriby Caller is reporting the odour from Transwaste last night at 19:30. There was a slight wind, it was cloudy and overcast. The smell was outdoors but very strong, the windows were closed which did stop it getting indoors. The site is about a mile away, caller lives NE of the site with the prevailing wind. This smelled pungent, difficult to describe, unpleasant. Caller has been down to the site previously to check it was definitely Transwaste. There is a high level of waste stored there, caller doesn't know if the odour is from the storage or the processing. Caller does report this quite regularly. They rate it 3/6. Caller believes this is a breach of the 1974 H&S work regulation, they have a NEBOSH(?) certificate.	sw	w	Y	
26	1658355	17/10/2018 10:51	North Ferriby	Location: North Ferriby	Yorks - Odour Location: North Ferriby Caller is reporting odour from Transwaste. Caller describes the odour as rotting food, silage. First noticed at 09.15 - there yesterday. Caller is reporting a mile from the site. Odour isn't inside the property, doors and windows closed. Weather conditions are cloudy, windy, dry. Caller rates the odour as a 4 on the scale.	NW, W, SW	sw	Y	
27	1658559	18/10/2018 08:52	Long Plantation		02030 258 149 YOR - Odour - North Ferriby Odour from Transwaste Is a dreadful smell This started at 20 past 8 Caller is a mile and a half away The smell gets in the house even with the windows and doors closed Rated at a 6 Weather is a nice clear day	NW, W, SW	W, N	Y	
28	1661492	02/11/2018 08:09	Long Plantation	Ferriby	0203 0258149 - Y - Odour - North Ferriby The caller is reporting an odour coming from Trans Waste in North Ferriby It smells like household waste	NW, W, SW	W, SW	Y	

					The site is about a mile away The odour was first noticed in the last half hour The odour rates as a 5/6 The odour is not getting into the house with windows closed The weather is fairly calm The caller is still waiting for a call back from a previous report weeks ago				
29	01662799 (M)	07/11/2018 19:23	Melton	Location: Melton	YOR - Odour - Location: Melton 1/2 Odour coming from Trans Waste Caller said the odour is a rotting veg waste. Shed doors are wide open. Caller said they are supposed to shut down at 18:00. The site is about 1/2 a mile away. Caller said they noticed it at 14:00. The caller said they noticed it at 14:00. The caller said they colour is just outside. The caller said they colour is just outside. The caller said they can't have windows open due to the odour. The caller said is a 6/6 on the odour scale.	S	S	Y	
30	1662934	08/11/2018 13:44	Low Field Farm		Yorkshire - Odour - The reporter today is affected by a strong odour from Trans Waste, the site is about 1/2 mile away. The odour has invaded the work environment through door and windows closed. The odour is described of waste smell. The score of the smell 5-6 - 6 The reporter states the smell is not acceptable at all. The odour is constant at present. The odour happens when the wind is in the SE. The odour has been present since 0900 am. The odour is happening once or twice a week at present. The odour issue has been happening since the site opened in 2010. SR - CO. Checked wind direction. Southerly wind suggesting site is possible cause of odour.	SSE	S	Y	
31	1662940	08/11/2018 14:13	Low Field Farm	Odour	YOR Odour Caller is reporting the odour from Transwaste described as rotten smell making the caller feel sick and rated as 6/6. It was noticed at 13:45 and is not inside the building with the windows and doors closed. The caller is 0.5 miles from the site and the weather is calm and dry. Caller reports that the	SSE	S	Y	

					odour happens regularly, every time the breeze is toward the caller.				
					SR - CO. Wind direction is southerly indicating site is possible source. This is the second report in the last half hour.				
32	01674492 (M)	16/01/2019 17:47	RECYCLING AND		YOR - Odour - Long Plantation Caller reporting odour coming from Transwaste recycling site in Melton Smells like rotting rubbish Started about 16.00 today Caller is half a mile away Weather is fair and quite still Rated at 6/6 Odour is getting into callers when windows closed		sw		
33	1674495	16/01/2019 18:18	Long Plantation	North Ferriby	ml 18:28 - 0800 028 1886 - Y - Odour - North Ferriby The caller is reporting an odour coming from Trans waste in North Ferriby It smells like a bin lorry The odour was smelt from Church Lane and Grandale Garage The odour was first noticed at 16.50 The odour rates as a 3/6 The odour was smelt outside The weather is still and dry They are in breach of the consolidation work and the health and safety at work act There is a planning application for 24 hour working which the caller strongly objects to	NW, W, SW	W, SW	Y	
34	1674504	16/01/2019 19:38	Long Plantation		YOR - Odour - Long Plantation Caller reporting odour coming from Transwaste or could now be called Attero waste recycling site in Melton Caller is about 2 miles away from the site Smells like rotting rubbish Noticed today at around 16.00 Odour is outdoors and in callers car Weather is quite still today Rated at 6/6 Caller is unable to go running this evening due to the odour	NW, W, SW	W, SW	Y	
35	01677237 (M)	31/01/2019 11:18	Melton Waste Park		YOR - Odour - North Ferriby - Caller has a complaint of odour coming from Trans Waste which has changed name to Atttero which is about 1 mile or 1.25 from site Home is directly in path of prevailing wind. The odour was noticed even into the village which is another mile further. First noticed at 0945 and smell is still noticeable at 11:30. Site has been subject to quite a few complaints with the councillor Julie Abraham who is the ward councillor for Beverly east riding of Yorkshire Council becoming involved Odour is mostly noticeable externally. The current weather conditions are -3.5 with no wind. overcast. with fog on the ground and relatively damp on		S		Melton waste park = trans Waste

							-, -	
				road surface. Caller has rated the odour at 4 possibly 3 but this is subjective. This has persisted for some time and there has been an increase of smells and noise from the site. Caller is under the impression that it has been under the legislation for the EA improvement notices have been raised but caller hasn't seen any improvements as of yet. Caller has also noticed that they are taking food waste in which he believes they aren't permitted to do and this was divulged in the open planning committee. Weather checked and wind speed approx 7mph blowing to the West, not consistent with site being source of odour but given low temperatures (around -1C) then the dissipation of odour from the site could mean that it is impacting on North Ferriby. Site contacted and informed of basic details of complaints and asked to investigate.				
				YOR-Odour				
				Location - Melton Hill				
				Caller is reporting an odour that is coming from a waste processing plant called Trans Waste.				
				Caller advises that the odour is a vomit smell.				
36	1677255	31/01/2019 12:19	Melton Hill	Caller advises that the odour was first noticed at 12:15.	S	S	Y	
		12.19		Caller advises that the site is approx. 1 mile away.				
				Caller advises that the odour is not getting into the property but is outside.				
				Caller advises that the weather is very cold / foggy / no wind.				
				 Caller advises that the smell intensity is a 5.				
				Odour 1st of the month				
				York - Odour				
				Site creating odour: Trans Waste on Gibson Lane, in Melton (Attaro).				
37	01682738 (M)	25/02/2019 16:43	Long Plantation	The reporter has just come into the property at 16.25 pm when exiting the car, the odour was detected.	NW, W, SW	sw	Y	
	(141)	10.40		The site is about 1.1/4 miles away from the reporters property.				
				The odour is pungent bin waste.				
				The odour is 4-5/6.				
				The weather is warm and sunny about 13/14 degrees				

-	1		1						
					The odour is constant at present with no wind. The doors and windows need to be closed at the property. The last report made was 1677237, reporter states the warm weather is possibly the reason for today's odour issue. EMDO: 4mph SSE				
38	1682957	26/02/2019 10:42	Low Field Farm	YOR - Odour - Transwaste	ml 11:07, 11.13 - 020302 58149: YOR - Odour - Transwaste Call received to report odour coming from Transwaste which is a general waste disposal & landfill site Caller describes the odour as smelling like a chicken farm, excrement, ammonia, a toxic smell, the odour varies from day to day Reporters place of work where the odour is being smelt is approx a mile away from the site Caller states the odour is not in the building today but it has been in the past. The building has no windows, the odour enters through the air filtration system Weather conditions described as blue sky & still a nice & day Smell intensity scored as 3/6 today but some days it's a 6/6 EMDO - anticyclonic wind of 1-3mph	NW, W, SW	w, sw	Y	
39	1683745	28/02/2019 08:09	Long Plantation		Yor-Odour Location - Long Plantation Caller is reporting the odour coming from Transwaste. Caller advises that the odour is a sour rotting vegetation smell. Caller advises that the odour was present yesterday morning and evening and still present today. Caller advises the odour today was first noticed at 08:00am. Caller advises that the odour is not getting into the property as windows are closed. Caller advises that the weather is foggy and quite still. Caller advises that the site is approx. 1 mile. Caller advises the smell intensity is a 4-5 IM (CO) wind direction North Easterly 4mph, would support an odour at reporter's location.	NW, W, SW	changeable	Y	
40	01685947 (M)	10/03/2019 15:02	Long Plantation		YOR - odour Location - North Ferriby	NW, W, SW	W (gust 40mph)	Y	

					Caller reports odour from Trans Waste. Described as "sicky". Noticed now. Site is 1 mile away. Not getting inside with door and windows shut. Weather is sunny, slight breeze. Rated as 4. IM (EMDO) wind direction easterly at 40mph. Broadly supports an odour from the alleged source. Email sent to site as per instruction on local issues.				
41	1688545	21/03/2019 15:40	Melton Hill		YOR - Odour - North Ferriby Caller is reporting an odour from Transwaste - Gibson Lane Caller says the site is around 1 mile away Described as rotting household refuge Caller says this was noticed around 09:50 Has been intermittent - possibly due to the weather Caller says the site is operating with their doors open Caller says this is always the same with the site Caller says the odour is only noticed outdoors today Caller says the odour is only noticed outdoors today Caller says the dour is 3/6 Weather described as breezy	S	w, sw	Y	
42	1688588	21/03/2019 16:58	Long Plantation	Odour - Transwaste, Long Plantation	MSG@17:25 08000281886 YOR - Odour - Transwaste, Long Plantation Call received to report odour coming from Transwaste on Gibson Waste, Long Plantation The odour is described as being like an acrid, rotting waste smell The area where it was smelt is just over 1k away from the site in question The odour comes & goes The weather conditions are described as being a clear sky, nice & warm Smell intensity scored as 5/6	NW, W, SW	sw	Y	
43	1688604	21/03/2019 17:29	Melton Hill		YOR - ODOUR - Melton, Cottingham - Caller is reporting an odour coming from the waste site Trans Waste Gibson lane Melton. Smells like a rubbish tip very rank obnoxious foul bad odour. Definitely a 3/4 in odour strength varies depending upon the wind. Generally the smell is there all the time but doesn't get in the house with doors and windows shut. Caller is about half a mile from the site but is in direct line of the winds. Today it's clear sunny slight breeze coming from west. and the westerly wind brings the odour over the whole village.	S	w, sw	Y	
44	01698808 (M)	01/05/2019 10:10	Long Plantation	MAY 19, DUPLICATE UNATTENDED	TRANSWASTE 1ST ODOUR FOR MAY 19, DUPLICATE UNATTENDED REPORTS TO THIS. YOR - Odour Caller reporting odour coming from Trans Waste in North Ferriby, was talking dog for a walk at 10.10am and smelt odour at bottom of their street. This is 1 -1.5 mile away from site. Odour described as a refuse smell	NW, W, SW	sw	Y	

					Smell Intensity: 2/6 Weather Conditions: clear Not smelt odour for several weeks now but winds are back to SW winds therefore they smell the odour.				
45	1706178	30/05/2019 16:49	Long Plantation	Feedback required	YOR- Odour- Trans waste Ltd- Feedback required Caller is reporting odour coming from Trans waste Ltd Caller states that the site is about a mile away Caller states that the odour is a strong smell of waste bin rubbish Caller has just noticed the odour now The odour is not getting in the house as the windows and doors are being kept shut Caller describes the weather as humid, 20 degrees, over cast and no wind Caller would rate the odour 3 to 4 out of 6 CO: wind direction - SW so supports Transwaste as potential source	NW, W, SW	w	Y	
46	1707240	03/06/2019 20:56	Melton		YOR - Odour - 1 of 2 - Melton Transwaste - Gibbson Lane Melton Caller observed on 3/6/19 at 8.30pm Caller advised 1km away Caller described as foul pungent rotting waste Caller has observed before Caller rated as 5 Caller advised weather is breeze from direction of the site and fine Caller cannot smell with windows closed	S	S, SW	Y	
47	1707490	04/06/2019 15:11	Melton Hill	Transwaste,	YOR - Odour - Melton Hill, Transwaste, *Hostile Site* Odour from Transwaste, Gibson Iane, Melton. Transwaste Recycling & Aggregates Ltd EPR Lic no: EA/EPR/BP3792LD/V006 First noticed at 1230 yesterday - still an issue at 1830 yesterday. Sickly vomity smell. Rotting waste. Site is 1 mile away from caller. Odour only got inside with doors open. Weather was SW wind 14mh, sunny/overcast. Odour was 5 out of 6.	S	S, W	Y	
48	1708812	09/06/2019 21:14	Low Field Farm		YOR Odour The caller is reporting a sweet, smell described like grass cuttings coming from Transwaste in Melton. The site is	SSE	changeable	Y	

					around 3/4 of a mile away. Ongoing issue with odours. 4 on the smell scale. The smell was inside with a small window open.				
					The smell is not there now though, there was a delay in reporting as they went to the council with this. Noticed at 08:45 on the 7th.				
					Justin Jones (EMDO) checked wind data for this date and time, approx 15 mph from SSW. Wind was blowing from the site toward the reporter's property.				
					M/L @ 09.19 - 02030 258 149 - YOR - Noise/Suspected Permit Breach - Waste Transfer Station (Previously Trans Waste)- North Ferriby, Hull				
49	1709521	12/06/2019 08:56	Long Plantation	Noise/Suspecte d Permit Breach -	Noise described as a constant droning noise - this is coming from the site Unsure what it causing this This is during the night - every night seven nights a week Also plant noises - reverse beepers etc. Recently there was a hammer drill noise in the early hours	NW, W, SW	N		
					Can be heard from bed time on - lack of ambient noise makes things worse. Approx. 800m from site Audible inside property with doors and windows closed Reporter believes the site are operating out of permitted hours				
					YOR - Odour Complaint - North Ferriby -				
50	1719558	17/07/2019 09:30	Melton Hill	Ferriby -	Caller reporting a household waste smell from Transwaste Recycling and Aggregates Ltd - EPR/HP3932WF This was first noticed from 09:15am 17/07. The smell is rated at 1 out of 6 on our scale. The site is within 1600 yards of the caller's address. The smell has not entered the caller's property, and 1 window is still open. The weather is dry, sunny, with a very gentle breeze from the south west. The caller wished to state that the smell on 10/07 was rated at 5 out of 6 on our scale, but they were leaving for holidays and did not report it. ICS - Area with Hostile Site Ref: 3146.	S	changeable	Y	
52	1719872	17/07/2019 20:43	Long Plantation		YOR- Odour- North Ferriby caller is reporting odour coming from Transwaste Recycling and Aggregates Ltd - EPR/HP3932WF. the odour is described as stale, rotting vegetation and food, landfill smell. the odour was first noticed 18:00 and is still present. the odour has got progressively worse over the last 18 months. the site is located about 1/4 of a mile away. the smell is getting inside the house, as the windows were open. caller has just shut all the windows. the weather is fairly warm, raining and fairly still.	NW, W, SW	w sw	Y	

					caller rates the odour as 5/6.				
					RG (EMDO) wind direction from SW, suggesting Transwaste as the source of the odour				
53	1720179	18/07/2019 19:53	Melton Hill	Ferriby -	YOR - Odour Complaint - North Ferriby - Caller reporting a rotten household waste smell from Trans waste Recycling Caller noticed the odour at 7:30, however it has been on- going for the past 3 days and has been really bad Caller states that they can smell the odour all day Caller described the weather as, dry, wind, warm Caller said that the smell gets in when the windows are open, Caller leaves the windows open due to hot weather Caller would rate the odour a 4/6 yesterday it was a 5 This was first noticed from 09:15am 17/07. The smell is rated at 1 out of 6 on our scale. The site is within 1600 yards of the caller's address. The smell has not entered the caller's property, and 1 window is still open. The weather is dry, sunny, with a very gentle breeze from the southwest. The caller wished to state that the smell on 10/07 was rated at 5 out of 6 on our scale, but they were leaving for holidays and did not report it. RR EMDO - site emailed and site officer copied in as per local issues	S	SW	Y	
54	1721385	23/07/2019 14:06	Low Field Farm		YOR - Odour - Low Field Farm Via Email: "Whilst visiting a property in Melton, Hull yesterday there was a significant foul, waste smell in the air which in my opinion needs reviewing and the source establishing in view of remedial action. Trust you are able to conduct the necessary review. My suspicion is that it was coming from Transwaste - HU14 3HH - behind the property that I was visiting. "	SSE	S, SE	Y	
55	01723704 (M)	29/07/2019 11:50	Long Plantation	odour in his area of North Ferriby,	YOR - Odour - Reports a very strong odour in his area of North Ferriby, from nearby Transwaste Recycling Ltd., on Gibson Lane. Described a strong 'bin' smell, and rated 4/6 in strength. First noticed outside at 09:30, the smell is not yet in the caller's property.	NW, W, SW	sw	Y	

-					DMADDIG (20) Franklad are center and racted wind				
					P MARRIS (CO) - Emailed operator and noted wind direction light gentle westerly breeze				
56	1723888	29/07/2019 17:06	Melton Hill	odour from Transwaste in Gibson	<ul> <li>YOR: Odour. Caller is reporting the odour from Transwaste in Gibson Lane. Caller first noticed it just now after getting home. Smell is not inside the house, noticeable outside.</li> <li>Describes the smell as rotting food, rates severity as a 4/6.</li> <li>Caller is about 1 mile from the site, weather is currently 22degC, SW wind, dry.</li> <li>EMDO weather, wind from SW at 9mph, 22C</li> </ul>	S	S	Y	
57	1723913	29/07/2019 17:40	Long Plantation		YOR - ODOUR - Long Plantation - Caller said the site is called Transwaste. Caller said the odour is like emptied bins on bin day. Caller said they noticed it today at 10am but it has been going on for months. Caller said the site is half a mile away. Caller said the odour is getting inside the property with doors and windows closed. Caller said the weather is bright with blue skies with a slight breeze. Caller rated the odour as 5.	NW, W, SW	sw	Y	
58	1723956	29/07/2019 19:17	Long Plantation	Yorks - Odour from Trans Waste at	<ul> <li>Yorks - Odour from Trans Waste at Melton near North ferriby.</li> <li>Caller is reporting an odour from the Trans Waste site at Melton near to North Ferriby</li> <li>Caller describes the odour as decomposing material.</li> <li>Caller noticed this at 8am this morning and at 12 pm today.</li> <li>Caller states he's around 1 mile away from the site.</li> <li>Caller states the smell is outside and not in his premises.</li> <li>Caller states all windows and doors are closed at the moment.</li> <li>Caller stated they had heavy rain up to 8am followed by sunny periods for the rest of the day.</li> <li>Caller rated the smell as strong at a rating of 4</li> </ul>	NW, W, SW	sw	Y	
59	1726308	05/08/2019 07:43	Low Field Farm		0203 0258 149 YOR - Odour - Transwaste - North Ferriby, Hull Described as an odour of smoke	SSE	S	Y	

					First noticed at 06:20 Approx. 500m from the site Rated at 5/6 Noticeable inside the premises - doors and windows closed Weather is heavy cloud cover, slight breeze CO: Transwaste site on fire.				
60	1726505	05/08/2019 13:34	Melton Hill		Im @ 1354 0800 028 1886 YOR. Odour. Caller report Trans Waste Plant are producing a bad waste tip smell. Caller can also smell smoke as if there is a fire on the site but cannot see any fire. They are about 20 minutes' walk away. 4/6 on smell scale. Sunny and breezy weather. The smell is not getting inside the house. Windows have been closed.	S	sw	Y	
61	1726523	05/08/2019 13:54	Long Plantation		Odour - YORKS - Caller is reporting an odour Believed to be from the Trans waste Plant The odour is an acrid Smokey smell that gets the back of your throat, it was first noticed around 9am today but this is an ongoing problem The site is roughly 3 miles from the callers property and the odour is getting inside of the callers home, the windows are open due to hot weather The weather is no breeze, this morning there was rain when the odour was first noticed. The odour is rated at a 5 or 6	NW, W, SW	sw	Y	
62	1726559	05/08/2019 14:49	Long Plantation		YOR - Odour Caller reporting odour coming from Trans Waste Caller described the odour as a rotting smell Caller first noticed the odour today at around 1:30pm Caller stated that they are less than a mile away from site Caller stated that the smell is not getting inside the house Caller stated that they are keeping some windows and doors are closed but not all Caller described the weather as being slight breeze from the west Caller rated the odour as a 5	NW, W, SW	sw	Y	
63	1726613	05/08/2019 16:27	Melton Hill	01-Feb	l/m 16:38 02030258149 Yorks - Odour 1/2 Location: North Ferriby Caller reporting an odour coming from Trans Waste Noticed around an hour ago (15:30) Described as a putrid, boggy waste odour The caller is around 2 miles away from the site Can be smelt inside the property Windows had been left open Rated at 4/6 Current weather conditions are breezy and sunny	S	W	Y	

					YOR - Odour				
					North Ferriby.				
64	1726619	05/08/2019 16:34	Long Plantation		Odour coming from Transwaste. It's like a chemical type smell. First noticed at 15.30 and it's very wicked. The odour was getting into their property and they have had to close all their windows and doors. Rated as a 5. The weather is beautiful and sunny.	NW, W, SW	SW	Y	
					YOR - Odour - Melton				
					Customer believes the odour is coming from Gibson Lane, Melton, North Ferriby, North Humberside, HU14.				
					Odour described as acidic, burning waste.				
					Customer saw a large fire at the site 8am 05-08-2019 but couldn't smell anything as the wind was facing the other direction.				
65	1726635	05/08/2019 16:57	Melton		Customer is roughly less than a mile from the site.	S	SW	Y	
					Odour is currently just outside as the caller has the windows closed.				
					Weather is breezy and sunny. Wind blowing from the west.				
					Odour rated 5/6.				
					Wind direction according to BBC website is WSW putting reporter downwind of site				
				odour from	YOR: Odour. Caller is reporting the odour from Transwaste, thinks it has been present since lunchtime. Describes the smell as quite pungent, rotting veg.				
66	1726636	05/08/2019 16:57	Long Plantation	Transwaste, thinks it has	Caller is about 1 mile from the site. Rates severity as a 5/6.	NW, W, SW	sw	Y	
					Smell is outside the caller's house. Weather is sunny, not a lot of wind present.				
					+448000281886 YOR - Odour				
					Taking Place Near Long Plantation				
		0.5/0.0/			Caller reporting an odour.				
67	1726644	05/08/2019 17:09	Long Plantation	YOR - Odour	The site is called Trans Waste. The odour is a pungent, stale smell. Caller noticed the odour at 16.30. The site is a mile from property. The odour is getting inside the property, had to close windows and doors. Weather is intermittent and slight breeze.	NW, W, SW	SW	Y	
					Caller would rate the odour at a 6.				
68	1726649	05/08/2019 17:18	Long Plantation		NE - Odour, Hull Caller reports being affected by a bad smell emitting from Transwaste in Melton, Hull, close to caller's location.	NW, W, SW	SW	Y	

-	1								
					Caller describes the odour as "a bad smell but not at the worst it's ever been." They describe the odour as "a nasty, sicky, tip smell" - which is not thought to be associated with the recent fire onsite. Caller says that every now and then they can smell the effects of burning when the wind changes direction to coming from the site. But the sick type odour has been constant all day today and is not wind dependent. The underlying sick smell is rated at around 5/6 in intensity. Caller has been unable to keep the smell out of the house, as the weather is hot and humid, so all their windows have had to be open, as it's too muggy to cope with them closed.				
					YOR - Odour				
69	1726655	05/08/2019 17:28	Long Plantation		Taking Place Near Long Plantation Caller reporting an odour. The site is called Trans Waste. The odour is like a water treatment plant when it goes wrong, a very strong smell. Caller noticed the odour at 16.45. The site is 2 miles from the property. The odour is not getting inside the property, it was at the allotments in North Ferriby. Weather is sunny and quite windy. Caller would rate the odour at 6.	NW, W, SW	sw	Y	
					+448000281886 NE - Odour, Hull				
70	1726664	05/08/2019 17:41	Long Plantation	NE - Odour, Hull	Caller reports being affected by a bad odour emitting from Transwaste, Melton, Hull, located by their description about 5 minutes' drive away. The smell is described as being "pretty darned grim today" and smells a bit like they'd imagine rotten cod liver to smell. The smell is said to have been hanging around since getting from work at 3pm. Caller has since run some errands and come back to find the smell is still there. They rate the odour at around 4/6 for "general obnoxiousness" and says that they "can't get away from it". The odour is seeping into the house as the windows are all open, due to the warm, humid weather making conditions too hot to close them.	NW, W, SW	sw	Y	
71	1726671	05/08/2019 18:07	Long Plantation		YOR - Odour - North Ferriby Caller is reporting the odour from Trans Waste. This smells disgusting, it's gassy and poo-ey rubbish. Caller noticed this arriving home at 16:00 as they drove into the village on the far side. The smell is inside the house. The windows are open as it's so hot. The smell is stuck indoors so no point closing the windows. It's a lovely bright sunny day with minimal breeze.	NW, W, SW	sw	Y	

-									
					This site is about 1/2 a mile away maximum. Caller is rating this 5/6 it's really bad.				
72	1726894	06/08/2019 12:38	Melton Hill		NEA - Odour         Caller reporting odour coming from Transwaste described as a refuse smell         Caller lives around half a mile from the site         Caller noticed this around 08:00 and still present now         Caller can smell the odour upstairs in the property - windows are open there         Rated as a 5/6         Weather is a bright breezy day         Caller also advised that the odour was present all over the weekend         Caller advised that it is nuisance to keep calling us to report this         P MARRIS (CO) - Prevailing wind in direction of reporter, email to the operator to investigate	S	S	Y	
73	1726927	06/08/2019 13:38	Long Plantation		YOR - Odour - Long Plantation The caller is reporting Trans waste for odour The odour smells noxious and nasty The caller believes the odour started about 14:00 The caller had to close all the windows from around 18:00 The caller reports that this has happened in the past before The odour was getting inside the callers home The caller lives within two miles of the site The weather was warm The odour was a 5/6 The caller would like Feedback	NW, W, SW	SW	Y	
74	1726994	06/08/2019 15:27		Caller reporting foul odour from the	YOR - ODOUR - MELTON Caller reporting foul odour from the Transwaste site, on Gibson Lane, near her address. The odour is described as being sickening, and smelling of rotten food and rubbish. Reporter states that the odour occurs on most days, but was noticed today after returning from work. The caller lives on the next street along from the site, which is about a 5-10 minute walk away. The odour is getting inside the house and requires closing of windows, caller is unable to sit in her garden. The weather at the time that the odour was noticed was warm. Caller describes the smell as being a 6/6 on the odour scale. P MARRIS (CO) - contacted Steve Taylor, Ash Jones to check for the odours in local area and how bad.		sw		
75	1727040	06/08/2019 16:26	Long Plantation	Odour.	+442030258149 - No answer - YOR. Odour. Caller reports a Trans Waste plant in the next village which has been producing an awful smell recently. The smell is 4/6 on smell scale. The weather is breezy and dry. The	NW, W, SW	sw	Y	

					smell is getting inside the house, but they have the conservatory door open. It smells like stale refuse today.				
76	1727075	06/08/2019 17:56	Long Plantation	YOR - Odour	+448000281886 YOR - Odour Caller reporting odour coming from Transwaste described as sitting next to a rubbish bin Caller noticed this from around 17:00 Caller lives around a mile from the site Weather is humid Rated as a 4/6 Caller can slightly smell this inside the property - windows open	NW, W, SW	sw	Y	
77	1727211	07/08/2019 10:09	Melton Hill	is reporting the odour from	<ul> <li>+442030258149 - YOR: Odour. Caller is reporting the odour from Transwaste. The site has been bad for a while, first noticed today at about 07:30, still present now. Rates severity as a 6/6. The caller describes the smell as like living next to a chicken farm, also a refuse smell.</li> <li>Gets inside the caller's house, but not when the windows and doors are closed. Caller is less than half a mile from the site. Weather is currently light rain, cloudy, some breeze.</li> <li>Sglenville, CO 07/08/19 @ 11:08 hours. two reports received, wind direction is W to WSW, 5.9 m/s. Dry, overcast, clear. Operator notified by email of odour reports at 11:45 hrs.</li> </ul>	S	sw	Y	
78	1727242	07/08/2019 10:50	Long Plantation		020 3025 8149 YOR - Odour - Transwaste - North Ferriby, Hull Described as like a rubbish tip First noticed today at 10:00 Approx. 800m from the site Rated at 5/6 Noticeable inside property - windows slightly ajar Weather damp, slight breeze South Easterly	NW, W, SW	sw	Y	
79	1727339	07/08/2019 13:59	Long Plantation		YOR - Odour - Long Plantation Call received to report odour coming from Trans Waste The odour is described as being scorched household waste due to a fire that was at the site at the weekend The reporter picked up on the smell whilst out walking, the odour doesn't affect the reporter at their home Weather conditions are described as being bright, cloudy, warm Smell intensity is scored 4/6 Feedback is required, 10 day charter given	NW, W, SW	w	Y	
80	1727345	07/08/2019 14:14	Long Plantation		YOR - Odour - Long Plantation The caller is reporting an odour from trans waste development The odour smells of nasty waste The caller first smelt it at 14:14 The caller reports the odour could of been there all day they only opened the door	NW, W, SW	w	Y	

					The caller says the windows are shut so the odour won't get inside The site is a mile and a half from the callers home This has been happening for 3 years The caller reports the odour is getting more regular now The odour is a 5/6 today Sglenville, CO, 07/08/19 @ 14:30. Fourth report - STaylor attending. Wind direction WSW, 6.9 m/s. Reporter downwind of the suspected source.				
81	1727406	07/08/2019 16:19	Long Plantation		YOR - Odour - Trans waste Odour described as a strong smell of rubbish Noticed at 1615 today. Not getting inside the property as the windows and doors are closed. Weather is slightly damp with very little wind. Based 1.25 miles from the site. Rated as a 3 out of 6.	NW, W, SW	w	Y	
82	1727418	07/08/2019 16:32	Melton Hill	17.11: YOR: Odour. Caller is reporting	<ul> <li>0800 028 1886: Call failed at 17.03 &amp; 17.11: YOR: Odour.</li> <li>Caller is reporting the odour from a site called Transwaste in Melton. Noticed at the caller's house and Ferriby High Road, which is a mile further away than the caller, who is about 1 mile away. Rates severity as a 2/6 at house, 5/6 on the High Road.</li> <li>First noticed it today at about 16:15. Describes the smell as a rotten cheese, vomit. Noticed it outside.</li> <li>Weather variable.</li> <li>P MARRIS (EMDO) - wind direction SSW 1-2mph. Numerous calls today and site officer in contact with site. Notify officer.</li> </ul>	S	w		
83	1727422	07/08/2019 16:41	44, North Ferriby	YOR - SMELL - North Ferriby	0800 028 1886: Call Failed at 17.12: YOR - SMELL - North Ferriby Caller wanted to report smell from Transwaste, Gibson Lane in Melton Caller said the smell had gone worse from last call at 1615hrs - NIRS REF: 01727406 Caller said it was strong smell of rubbish and rotting food Caller said they had first noticed smell around 1615hrs and it had gone considerably stronger Caller said the site was about one and quarter miles from where they were Caller said the smell was making them not open the windows Caller said there was hardly any wind, slightly overcast and slightly damp, Caller said this had been going on for years and nothing seems to be happening. Caller said they asked for feedback and said this was 3rd call this week I asked caller to call us for feedback but they insisted that	w	w	Y	

					they will wait for call from EA with feedback				
					P MARRIS (EMDO) - wind direction SSW 1-2mph. Numerous calls today and site officer in contact with site. Notify officer.				
84	1727489	07/08/2019 21:13	Long Plantation	Ferriby -	YOR - Odour Complaint - North Ferriby - Caller reporting a rotting bin waste smell from Transwaste Recycling and Aggregates Ltd - EPR/HP3932WF This was first noticed today between 16:00pm and 16:30pm 07/08. The site is within 1 mile of the caller's address. The smell is rated at 5 out of 6 on our scale. The smell has not entered the caller's property as they have had to close their windows. The caller has cancelled their run. The weather is dry with an easterly breeze. Caller would like feedback as they have questions about the site - 10 working day charter explained. P MARRIS (EMDO) - wind direction SSW 1-2mph. Numerous calls today and site officer in contact with site. Notify officer.	NW, W, SW	W	Y	
85	1727500	08/08/2019 00:38	Melton Hill		+442030258149 - Yor - Odour Caller reporting the smell from Trans Waste. Caller describes the smell as an overpowering refuse manure smell. Caller is less than half a mile from the site and the smell is in the caller's property. Rated 6. The weather is mild and still. CO Check of the weather using www.xcweather.co.uk took place. The wind direction at 10:00hrs is due to be from the west and it was from the west earlier in the morning. This means the permitted site could potentially be the source of the odour.	S	S	Y	
86	1727516	08/08/2019 07:59	Long Plantation	Ferriby.	<ul> <li>+442030258149 - YOR- Odour- North Ferriby.</li> <li>caller is reporting odour coming from Trans waste.</li> <li>the odour is described as a strong smell of rubbish, caller says it's like seating next to dust bin.</li> <li>the odour was first noticed about 10 minutes.</li> <li>the site is about a mile or a mile and quarter away.</li> <li>the smell is getting inside the house.</li> <li>caller had to close the window.</li> <li>the weather very dry, clear, sunny and very light breeze.</li> <li>caller rates the odour as 4/6.</li> <li>CO Check of the weather using www.xcweather.co.uk took place. The wind direction at 10:00hrs is due to be from the weat and it was from the west earlier in the morning. This means the permitted site could potentially be the source of</li> </ul>	NW, W, SW	S	Y	

-					-				
					the odour. Email notification sent to the site requesting feedback.				
87	1727645	08/08/2019 12:06	Melton Hill		YOR. Odour. Caller reports household waste smell coming from Trans Waste about a mile away. 3.5/6 on smell scale. Blustery wind and clear weather conditions. The smell is not getting inside the house, but the windows are closed. CO Wind direction is currently from the west making the permitted site of Transwaste the most probable source of the odour pollution described. Site to be notified by email and along with regulatory officer who is aware of several reports.	S	S	Y	
88	1727843	08/08/2019 18:30	Melton Hill	Gibson Lane Melton Hu14 3HH	YOR - Odour from Trans waste Site Gibson Lane Melton Hu14 3HH The caller rang to report an odour from Trans waste Site Gibson Lane Melton Hu14 3HH The caller describes the odour as a fowl off milk odour The caller states they noticed the odour at 18:00 The caller states they noticed the odour at 18:00 The caller states the odour is getting into their property - windows and doors closed The caller states the weather is Fairly still, Fairly sunny The caller states the odour is a 5 P MARRIS (EMDO) - pass to EM	S	changeable	Y	
89	1728137	09/08/2019 14:16	Melton		YOR - Odour - Melton The caller is reporting Transwaste for odour The odour is describes as rotting waste The caller first smelt this at 14:15 The caller reports this has been happening for 3-4 years The caller is half a mile from the site The weather is overcast and slightly windy The caller can't smell the odour while inside due to windows closed The odour is a 5/6	S	S	Y	
90	1728219	09/08/2019 16:43	Melton		0800 028 1886 Industrial Action: YOR - Odour - Melton caller reporting a "sour" odour from the Transwaste waste transfer station in North Ferriby. Caller has just come back off holiday and he says that as soon as he opened his car door the smell "hit" him. Odour is not in the house as the doors and windows are closed, but it smells very strong outside. The weather conditions are windy with some rain. Caller would rate the smell a 4.	S	S	Y	

					Transwarta's address: Cibson L.s. North Forriby Matter				
					Transwaste's address: Gibson Ln, North Ferriby, Melton HU14 3HH				
					P MARRIS (EMDO) - pass to EM				
					0800 028 1886 INDUSTRIAL ACTION YORKS ODOUR TRANSWASTE RECYCLING.				
91	1728306	10/08/2019 07:27	Melton		Calling to report the odour coming from TranswasteRecycling centre- Gibson Lane. First noticed a few minutes ago. Describes the odour as waste dump rotting rubbishnot as sour as yesterday The wind is bringing it in waves the wind is very strong Rates it as 1-2. Caller is approx. less than 1/2 mile from the site.	S	S (gust wind)	Y	
					P MARRIS (EMDO) - pass to EM				
92	1728515	11/08/2019 08:14	Melton	Melton -	<ul> <li>+448000281886 - YOR - Odour - Melton -</li> <li>Odour from Transwaste in Melton.</li> <li>Caller advised this was noticed along Brickyard Lane and Monks Way being worst in the underpath under the interchange. Caller advised the air is stagnant and concentrated in this location.</li> <li>Distance is about 0.7 miles away.</li> <li>Caller advised there is a blustery wind blowing in that direction from the site.</li> <li>First noticed at 07:40 on the 11/08/2019.</li> <li>Described as old landfill smell with a burnt smell from the recent fire.</li> <li>Odour rated as 3 out of 6.</li> <li>EMDO - wind direction checked and SW 17mph with gusts &gt;30mph</li> </ul>	S	S	Y	
93	1728546	11/08/2019 11:09	Long Plantation	YOR Odour Long Plantation	02030258149 msg left 11:35 & 11:58 YOR Odour Long Plantation MELTON Caller reported Odour coming from Transwaste in Melton today at 11.00 am Caller stated that the odour has been present for the past few days Caller lives approx 2 miles away Caller described the Odour as rubbish tip odour Caller stated that they have had to keep all windows and doors closed Caller stated that the weather today has slightly breezy and overcast Caller stated that they would rate the odour as 4 /6 on the scale EMDO: checked wind direction at time of report - WSW 17mph.	NW, W, SW	S, SW	Y	

									.,
94	1728629	11/08/2019 20:02	Long Plantation	Odour from Transwaste Gibson Lane	LM@20:14- 08000 281 886 - YOR - Odour from Transwaste Gibson Lane The caller rang to report an odour from Transwaste Gibson Lane The caller describes the odour as a rubbish tip smell The caller noticed the odour at 19:55 The caller states their property is 1 - 1 1/2 miles away from the site The caller states the odour isn't getting into their property - windows and doors closed The caller states the weather is breezy, clear and cloudy The caller states the odour is a 4 EMDO checked wind direction at time of report - W 14mph	NW, W, SW	w	Y	
95	1729140	13/08/2019 12:31	Long Plantation		YOR - Odour - Trans waste Odour described as horrible. This was noticed at 1130 today The odour is not getting indoors as the windows and doors are having to be kept closed. Clothes cannot be out on the line as they end up smelling of it. This is getting worse recently. Based around half a mile away as the crow flies. Weather is cloudy, cool and a bit of a breeze. Rated as a 5 out of 6. IM (CO) SW wind at 17mph at 11:30. Consistent with odour from alleged site.	NW, W, SW	w	Y	
96	1729261	13/08/2019 17:38	East Clough		YOR-Odour-East Clough Caller has said that there is a smell or garbage that has been around for the past few weeks. This smell is around a level 5 at the moment. There is a westerly breeze and it is sunny. Caller has stated there is a recycling plant near them and this is normally the reason for the smells. EMDO wind direction checked - W -11mph caller is downwind of site.	SE	w		NEAR RIVER, end of brickyard lane
97	1729331	14/08/2019 06:35	Melton		02030258149 YOR - Odour - Melton Call received to report odour coming from Trans Waste, Gibson Lane The odour is described as being sour, rotting stuff, really, really sour The odour has just been detected this morning The reporters property is approx 1.7 miles away from the site in question The odour doesn't enter the callers property Weather conditions are described as being a slight drizzle with a slight wind Smell intensity is scored as 2 to 3 out of 6	S	S	Y	
98	1729336	14/08/2019 07:48	Low Field Farm		02030258149 YOR. Odour.	SSE	S	Y	

					<ul> <li>Caller reports a very unpleasant odour from Trans Waste, about 600 yards away. It is a food processing sickly waste smell. 5/6 on smell scale. The smell is getting inside the building. It gets inside despite windows being kept closed. Weather is damp and still.</li> <li>CO (AH) - Wind direction between 6-7am was ENE and N, then ESE at 8am. The reporters are north of the site.</li> </ul>				
99	1729679	15/08/2019 10:39	Long Plantation		YNE: ODOUR: Caller reports the smell again from Transwaste. This was noticed at 10.15am. The odour is described as "rotting waste" and rates as 4/6 at the moment. The smell is obvious outside the property which is within half a mile of the site. Caller is having to keep doors and windows closed where possible. Weather conditions are fine and dry with a stiff westerly breeze. Location: Riverview Avenue, North Ferriby.	NW, W, SW	w	Y	
100	1729774	15/08/2019 14:40	Long Plantation		YOR. Odour. Caller reports a rotting sweet waste smell coming from Trans Waste, between 500 and 1000 meters away. 3/6 on smell scale. Very windy weather generally from the west but it is blustery. It has been drying all day. The smell is not getting inside the house. Caller had windows closed. CO - wind direction W 15mph	NW, W, SW	W (gust wind)	Y	
101	1729813	15/08/2019 16:06	North Ferriby	Industrial Action - YOR - Odour	+442030258149 Industrial Action - YOR - Odour Complaint - North Ferriby - CAT3 - Caller reporting a toxic smell from Transwaste Recycling & Aggregates Ltd - EAWML/65528 This was noticed today from 13:00pm 15/08, and the severity has increased since that time. The smell is artificial, possibly masked with deodorant. The site is 1.23 miles from the caller's address. The smell is rated between 4 and 5 out of 6 on our scale. The smell has not entered the caller's property as windows are closed. The weather is bright, sunny, with a breeze from the direction of the site.	w	w	Y	
102	1730208	17/08/2019 13:01	Long Plantation		0800 028 1886 YOR - Odour - Transwaste - North Ferriby, Hull Described as a strong pungent smell	NW, W, SW	w	Y	

				First noticed at 12:30 Approx. 1.25 miles from the site Rated at 5./6 Not noticeable inside property - window Dry day, Westerly wind, warm day approx. Cannot sit outside in garden Reporter advised that they are dismayed at lack of action taken by the EA EMDO: 14mph SWW, placing reporter dow	<i>is</i> closed 18 degrees the apparent			
				YOR - Odour - Melton Hill				
103	1730304	18/08/2019 11:40	Melton Hill	Caller reports odour coming from Tran Caller states the odour is a sweet, rotting, Caller explained they noticed the odour from Caller advises the site is about a mile away fr Caller states the odour is getting into th Caller reports their windows are o Caller explained the weather is sunny an Caller rates the odour as about a	sickly smell n 10am today rom their home eir house pen nd cloudy	sw	Y	
				EMDO: 14mph SWW, placing reporter down	nwind of site.			
				0800 028 1886				
				YOR - Odour - Transwaste - North F	erriby			
104	1730309	18/08/2019 12:11	Long Plantation	Described as strong and like following a dur pungent First noticed at 10.30 Approx., 1 mile from the site Rated at 4/6 Not noticeable inside property - doors and w Weather is dry - Westerly gusty w	st cart - quite NW, W, SW indows closed	sw	Y	
				Cannot sit out in the garden				
				EMDO: 14mph SWW, placing reporter down	nwind of site.			
105	1730311	18/08/2019 12:23	Melton Hill	YOR - Odour Complaint - Melton H Caller reporting a sour milk smell from T Recycling and Aggregates Ltd - EPR/Hf This was first noticed today from 12:00pm 18 1.13 miles from the caller's address. The sme out of 6 on our scale. The smell has not ente property as they have kept all their window	ranswaste 23932WF /08. The site is ell is rated at 5 red the caller's // s and doors	SW	Y	
				closed. The weather is sunny with a weste	-			
				EMDO: 14mph SWW, placing reporter dow	nwind of site.			
	1730327	18/08/2019 14:24	Melton Hill	YOR/ODOUR	_			
106				Caller reporting an odour from Trans	waste S	sw	Y	
				Noticed before 10.00hrs				
				Odour smells like a pig slurry, or a rotten an	imal material			

					smell				
					Rates 4				
					Odour cannot be smelt inside the property with the doors and windows closed				
					Weather is windy blowing from the south west, dry.				
					Caller lives approximately 2 to 2.5 miles from the site.				
					Call taken @ 14.24 on 18.08.2019				
					EMDO: 14mph SWW, placing reporter downwind of site.				
					YOR - Odour - Melton Hill				
108	1730328	18/08/2019 14:25	Melton Hill		The caller is reporting an odour from a Transwaste plant The caller lives a mile away The odour smells like a waste smell First noticed at 11:00 The odour isn't getting inside due to the caller having to close windows The caller has smelt this in the past but not this bad The weather is sunny and cloudy and a bit breezy The odour is a 3/6	S	sw	Y	
					EMDO: 12mps SW; placing reporter downwind of site.				
					YOR - Odour Complaint - Long Plantation -				
					Caller reporting a rotting vegetation / cheese smell from Transwaste Recycling and Aggregates Ltd - EAWML/HP3932WF				
109	1730329	18/08/2019 14:37	Long Plantation	Plantation -	This was first noticed today from around 12:00pm 18/08. The site is within 1500 yards of the caller's address. The smell is rated at 4 out of 6 on our scale. The smell has entered the caller's property through an open bedroom window, now closed. The weather is sunny with a breeze.	NW, W, SW	sw	Y	
					EMDO: 14mph SWW, placing reporter downwind of site.				
					0800 028 1886				
					YOR - Odour - Transwaste - North Ferriby				
110	1730353	18/08/2019 17:04	Long Plantation		Described as a sour smell First noticed at 14:00 until 16:00 Approx. 1 mile Rated at 5/6 Not noticeable inside property - doors and windows closed Dry, South Westerly breeze	NW, W, SW	SW	Y	
					EMDO: 14mph SWW, placing reporter downwind of site.				
		10/00/00/00/0			YOR - Odour - Transwaste				
111	1730368	18/08/2019 19:49	Melton Hill		FEEDBACK REQUESTED Smell is a mix of sour rubbish and a poultry farm. It is obnoxious. Scale 6	S	SW	Y	

					First noticed about 1900hrs when going outside but odour may have been there before then It has got into the house. Windows are open Caller lives 600yds from the site No wind or breeze Caller has not been at home all weekend so cannot say if it was bad yesterday or not Caller wonders if this is a permit breach as it is a Sunday evening, and if they conform to their permit regulations EMDO: 12mph SW, placing reporter downwind of site.				
112	1730371	18/08/2019 20:25	Melton Hill		0800 028 1886 YOR - Odour - Transwaste - North Ferriby, Hull Described as rotting waste - Vomit and cheese First noticed at 20.25 Approx. 1 mile from site Rated at 3/6 Not noticeable inside property - Doors and windows closed Weather dry, South Westerly breeze EMDO: SSW 14mph, placing reporter downwind of site.	S	sw	Y	
113	1730442	19/08/2019 10:46	Long Plantation		+442030258149 YOR - odour Location - North Ferriby Caller reports odour from Transwaste. Described as rotten waste. Noticed at 10:30. Site is 1 mile away. Noticed outside. Weather is sunny, breezy. Rated as 5. IM (CO) 14mph Westerly wind supports report. Emailed site.	NW, W, SW	S, SW	Y	
114	1730490	19/08/2019 12:25	Long Plantation	Ferriby	YOR - Odour - Transwaste, North Ferriby Caller is reporting a sour milk smell coming from Transwaste, which is about 2 miles away. The smell isn't in the house with windows closed, with a strength of 3/6. The weather is windy, Cloudy and cool. IM (CO) Westerly wind 15mph. Supports report. Emailed site requesting investigation.	NW, W, SW	W	Y	
115	1730514	19/08/2019 13:24	Long Plantation	Site	YOR- ODOUR- Transwaste Waste Site Caller states the odour is coming from Transwaste Waste Site Caller states there is a pungent smell, like they are sitting next to a rubbish bin Caller states the odour is continuous and persistent. Caller states the odour was first noticed early morning but the odour has been happening over the last few days Caller states he reported the odour on Saturday and Sunday Caller states the site is about a mile away Caller states they can't open windows because they don't want it getting in the house Caller states there is a westerly wind that is slightly gusty,	NW, W, SW	W	Y	

				19-20 degrees Caller states the odour 3 out of 6											
				IM (CO) 15mph Westerly wind. Emailed site.											
				YNE Odour											
116	1730546	19/08/2019 14:54	Long Plantation	The caller is reporting the odour from Trans waste on Brickyard Lane noticed at 14:30 it happens every day. The smells the horrible rotting food smell. The caller can smell this in the house and garden, the caller has to shut all the windows to keep the smell out. The caller is about 0.25 miles from the Trans waste site, The weather is overcast, with a slight breeze. The smell is a good 6/6 the caller has been sick, but it makes the caller feel ill.	NW, W, SW	SW (gust wind 30 mph)	Y								
				Yor - Odour - 1 of 2											
				Trans Waste at present is emitting a very bad odour that is described as ammonia, leaving an acid taste in the throat.											
											The odour was first detected today 30 minutes ago the odour has invaded the property and the reporter is closing the windows on the call.				
		19/08/2019		The site is about 0.5 miles away from the house.											
117	1730589	16:23	Melton Hill	The weather outside is still but it has just rained with no wind present.	S	W									
				The score of the odour is 6/6											
					The reporter is unable to use the back garden at all										
				The odour is constant at present.											
				IM (CO) 14mph Westerly wind. Emailed site.											
				Yor Odour - 2 of 2											
				Yesterday the reporter was badly affected by a bad odour from Trans Waste.											
				The odour was first detected about 0915 when exiting the house and this lasted all day long											
		19/08/2019		The site is 0.5 miles away from the house.											
118	1730591	16:29	Melton Hill	The odour was of ammonia	S	W									
				The doors and windows needed to be closed all day											
				The weather was windy and sunny											
				The odour was constant at the time.											
				This is an ongoing issue for the reporter.											

				The score of the odour was 6/6 and this was the score all day.					
119	1730604	19/08/2019 17:31	Low Field Farm	YOR-Odour-Melton Waste Park Caller is ringing for a strong odour coming from Melton Waste Park The odour smells like the bottom of a dustbin The odour is there all the time and today around lunchtime i was rated around a 4 The caller is around 1 mile away from the site The odour is not getting in the house, its picked up on the outside of the property Caller has said they keep the windows and doors closed due to the smell getting inside The conditions are sunny with a slight breeze EMDO: 8mph SW, placing reporter downwind of site.	SSE	w			
120	1730621	19/08/2019 10:38	Melton	YOR. Odour. Email. "I am just wondering who I need to complain to about the waste smells please? I live very near to a Transwaste site HU14 and this morning I opened my windows to be met with a disgusting smell, enough to need to close the window. This is not the first time this has happened recently, and the problem seems to be getting worse." EMDO: Unable to assess due to delay between report	5	S	Y		
121	1730704	20/08/2019 10:36	Melton Hill	YOR - Odour North Ferriby. The caller is reporting odour coming from Transwaste recycling. Rotten acrid smell leaves a taste at the back of the throat. The reporter says they have got the odour around their home and where they are walking their dog. Noticed at 08.00 and still present now. Rated as a 5. They are having to keep windows closed to try to suppress the odour. They are half a mile from the site. The weather is still, dry and clear skies. P MARRIS (EMDO) - email sent to operator and Steve Taylor. Wind direction variable through the morning but at times of concern in report were in the direction of the reporter.	S	sw	Y		
122	1730757	20/08/2019 12:15	Melton Hill	YOR - Odour - Melton Hill The caller is reporting an odour from Transwaste The odour started 11:40 The odour isn't getting inside the caller property The caller says it's a 4/6 The caller said they could smell it worse in the nearby town The caller says this has been happening for a few years The caller says that the EA is currently taking action The caller lives over a mile from the site	s	w			

-									
					P MARRIS (EMDO) - cat 3 on hold and pass to Steve Taylor				
123	1730851	20/08/2019 16:29	Long Plantation	Ferriby	YOR- Odour Trans waste North Ferriby The caller advised it's a terrible stench. The caller advised can be tasted in the air. The caller advised its acrid, vomit smell. The caller has just been outside to hang washing out and the odour hit them. Unable to hang their washing out. The caller lives approx. 1 mile away. The caller has had windows and doors closed so not inside their home currently. The caller 6/6 for intensity. P MARRIS (EMDO) - spoke to out of hours Simon Caine, passed to him for info tonight. CAT 3 oh	NW, W, SW	w	Y	
124	1730852	20/08/2019 16:32	Long Plantation	North Ferriby -	YOR - Odour - North Ferriby - The caller is reporting on an odour from Trans Waste. The smell is described as sour and acrid like rotting meat. This was first noticed at 07:30 and has been ongoing all day. The caller is half a mile from the site. The odour is rated as 4/6. The smell is getting inside the property with the windows and doors open. The weather conditions today are dry and still. P MARRIS (EMDO) - passed to Simon Caine out of hours for info and further action if required	NW, W, SW	w	Y	
125	1730871	20/08/2019 17:12	65, North Ferriby		YOR- Odour Transwaste North Ferriby The caller advised the odour is a sweet rotten smell like putrid waste. The caller noticed it about 30 minutes ago. The caller lives approx. half a mile from the site. The caller advised its outside but have to keep windows and doors closed. The caller advised the weather is breezy with a northly wind. The caller rates 4/5-6 for the intensity. EMDO: 11mph SW placing reporter downwind of site.	W	w	Y	
126	1730878	20/08/2019 17:26	Long Plantation		YOR- Odour Transwaste North Ferriby The caller advised the odour is like a rotten food tip smell. The caller first noticed this morning and has got worse as the day has gone on. The caller advised their children are affected by it. First noticed about 11am. The caller advised the odour is inside their home and lingering inside. The caller lives less than 1 mile from the site. The caller advised the weather has been warm and slightly overcast. No breeze. The caller rates the intensity 6/6 for intensity.	NW, W, SW	w	Y	

-					EMDO: Unable to assess due to delay between incident and				
					report. +442030258149 - YOR - Odour - Long Plantation				
127	1730939	20/08/2019 23:05	Long Plantation	Plantation	Call received to report odour coming from Trans Waste The odour is described as being like household waste The odour is on & off most days The callers property is approx 1.7 miles away from the site in question The odour enters the callers if windows & doors are open Weather conditions are described as being calm, no strong wind Smell intensity is scored as 6/6 EMDO: 5mph SSW, fair placing reporter downwind of site.	NW, W, SW	sw	¥	
					YOR/ODOUR				
128	1731230	21/08/2019 19:50	Melton Hill		Caller reporting an odour from Transwaste Noticed at 19.50hrs Odour smells like a dustbin that has been left a while, like following a bin lorry round. Rates 2 Odour cannot be smelt inside the property with the doors and windows closed Weather is mild and dry and no breeze Caller lives approximately 1 and half mile from the site. Call taken @ 19.50 on 21.08.2019 Sglenville emdo, 21/08/19 @ 19:58. Very busy with reports from elsewhere. First odour report for this site tonight, wind direction SSW. NO attendance at this time.	S	SW	Y	
129	1731255	21/08/2019 21:21	Melton	It smells like waste when it gets really	YOR - Odour from Transwaste, It smells like waste when it gets really hot The caller first noticed the odour at 21.20 The site is less than a mile away On a scale out of 6 the customer rates it as a 6 The caller can smell the odour inside the property. The windows are closed, and the door was opened for the dog to go out. They will have to keep the windows closed because of the odour The weather conditions are fine but it was raining earlier with a slight wind There never used to be as bad but the site have 2 major fires at the site which has made it worse. Sglenville, EMDO. 21/08/19. Wind direction SSW. Second	S	S	Y	

-									
					report of evening. No attendance, EMSC already deployed to other incidents.				
130	1731449	22/08/2019 13:58	Melton	chase CO to call ICS msg 14.09	<ul> <li>Spoke to ABC @14:50 said he would chase CO to call ICS msg 14.09 14.23 14:39 02030258149 YOR- Odour Transwaste Melton</li> <li>The caller describes as a waste smell. The caller advised its awful and its making their caller feel sick</li> <li>The caller advised can't be outside and the caller feels it's unfair. The caller is wanting to enjoy the bank holiday. The caller lives approx. 5 minutes car journey.</li> <li>The caller ladvised the weather is dull, warm and breezy.</li> <li>The caller has closed the windows so not inside their home but feels penned in.</li> <li>The caller first noticed at 1pm. The caller hasn't noticed a pattern of days or times.</li> <li>duty officer, wind blowing from SW, site notified and asked to investigate</li> </ul>	S	SSW	Y	
131	1731564	22/08/2019 17:33	Melton	Odour	08000281886 Industrial Action - Yor Odour The caller is reporting an odour from Transwaste which the caller noticed midafternoon Friday last week. The smell was like methane/sewage, it was indoors with the windows and doors shut. The caller can't remember what the weather was like last Friday, it may have rained at some point. The caller had to close their windows. The caller is not sure how far from the Transwaste site they are. The caller scored the smell as 6/6 for intensity, the caller has never smelled anything worse. The caller has had a note through the door today advising them to report any smells the area to 0800807060 as Transwaste.	S	sw	Y	
132	1731730	23/08/2019 10:42	Low Field Farm		YOR - ODOUR - MELTON Caller reporting odour that they have noticed quite often over the summer. After looking into this further, caller suspects it could be coming from the Transwaste site around the Gibson Lane area of Melton. Caller says there has been a lot of issues at this site, with local residents. Noticed this morning at about 9.30am. Can't describe the odour exactly, almost like a rubbish smell, mixed with a chemical smell. But couldn't say for certain, as not trained in that field. Can't smell inside the house, but that is because keep windows and doors closed. Caller says that the site is on the other side of the motorway from their property. As crow flies probably about 2-minute drive from the site. Weather is warm, with a fairly gentle breeze. 22 degrees	SSE	S	Y	

					Celsius and 7mph south westerly winds, according to phone. It says air quality 1, however caller says because of this smell, they wouldn't agree with that. Caller says seems to be worse when it is warmer. Rated 5/6. It is just unpleasant. Caller says that they have only lived in the village for about 18 months and it didn't smell like this. However, it is so bad, they are already thinking of moving. EMDO: Wind coming from the south, 8mph and fair - reporter downwind of the site. Emailed site asking for them to investigate and provide feedback.				
133	1731802	23/08/2019 13:19	Melton		YOR - Odour Complaint - Melton - Caller reporting an acrid, sour dustbin smell from Transwaste Recycling and Aggregates Ltd - EPR/HP3932WF This was noticed from 13:19pm 23/08. This was smelled as the caller was walking home along Monks Way, around 600 yards from the site in question. The smell is rated between 3 and 4 out of 6 on our scale. The weather is warm, clear, with south-westerly breeze. EMDO: SSW, 5-10mph, reporter down wind of the site. Emailed the site and requested feedback given to site inspector.	S	S	Y	
134	1731856	23/08/2019 15:17	Melton	Odour - Reports a very strong smell in	08000281886 Industrial Action - YOR - Odour - Reports a very strong smell in his area of Melton, near North Ferriby, from nearby Transwaste. The smell is described as a sour acrid smell and is rated 6/6 in strength. This is the second report from the caller today, and he says the smell is getting stronger.	S	S	Y	
135	1731892	23/08/2019 16:51	Long Plantation	Odour	0800 0281886 Industrial Action Yor Odour The caller is reporting the odour from Transwaste on Brick Yard Lane. The caller noticed the smell while they were gardening from about 15:30 this afternoon. The smell is like rotting meat or a butchers. The weather is really hot, hardly any breeze. The smell is outside. The caller says the smell is coming in waves and is a 3 at its worst	NW, W, SW	S	Y	
136	1731942	23/08/2019 19:36	Melton		0800 0281886 Industrial Action YOR - Odour - Believed to be Transwaste - North Ferriby Described as like a rubbish smell First noticed at 19:30 Approx. 2 miles from site Rated at 4/6 Noticeable inside the property - windows open Weather is dry, warm still day	S	S	Y	

137	1731947	23/08/2019 20:00	Melton	- Odour from Transwaste	0800 0281886 Industrial Action - YOR - Odour from Transwaste The caller rang to report an odour from Transwaste The caller describes the odour as rotting food/ bin smell The caller noticed the odour at 19:50 The caller states their property is 2/3 miles away from the site The caller states the odour is getting in to their property - windows and doors open The caller states the weather is Beautiful - nice sunny The caller states the odour is a 5	S	S	Y	
138	01732290 (M)	25/08/2019 08:59	TRANSWASTE	0281886 Yorks - Odour	<ul> <li>M/L 0923hrs &amp; 0937hrs 0800 0281886 Yorks - Odour Location: North Ferriby</li> <li>Caller is reporting odour from Transwaste. Caller describes the odour as sour. First noticed at 08.45. Caller is 1 and half miles from the site.</li> <li>Odour isn't inside the property, doors and windows closed. Weather conditions are sunny, still, clear. Caller rates the odour as a 4 on the scale.</li> <li>Sglenville, emdo, 10:35 hours on 26/08/19. Operator notified of reports since 23/08/19 by email. No further reports that day, cat 3 on hold, no attendance.</li> </ul>		E, N		
139	1732466	26/08/2019 08:11	Melton		08000281886 YOR. Odour. Caller reports a bad waste smell coming from Trans Waste, who are about 0.7 miles away. 6/6 on smell scale. Caller says it got into the house as he opened the back door. The weather is sunny and warm. There is a light breeze. Sglenville, emdo, 09:45 hours on 26/08/19, single report so far, no attendance at this time. Wind direction S to SSW, 21oc, 3.0 m/s at 09:30 hours.	S	S	Y	
140	1732747	27/08/2019 08:21	Long Plantation		YORKS - Odour - North Ferriby Caller reporting odour probably coming from Transwaste again. It doesn't smell like manure; it smells like bad eggs. It is rank, not pleasant. Rated 4-5/6. Weather is hot and a very slight breeze. First noticed outside at about 7.30am this morning. Haven't opened windows today, as yet. However, if they do then the smell will most likely enter the property.	NW, W, SW	changeable	Y	
141	1732753	27/08/2019 08:39	Long Plantation		YORKS - ODOUR - NORTH FERRIBY Caller reporting odour coming from Transwaste on Gibson Lane. Noticed at 8am this morning.	NW, W, SW	changeable	Y	

					Rated 4/6. Described as a composting type smell. Quite sweet and sickly. Weather is very still, dry and quite hot. About 25 degrees at the moment. No wind so the smell is hanging in the air. The windows were open last night and couldn't smell it, however as soon as opened the door to leave this morning, the smell was there. Caller's property is about half to 1 km from the site.				
142	1733406	28/08/2019 13:38	Long Plantation		YOR - Odour from Transwaste The caller rang to report an odour from Transwaste The caller describes the odour as a pungent smell - food waste The caller noticed the odour at 10:00 The caller states their property is a mile away from the site The caller states the dour isn't getting into to their property windows and doors closed The caller states the weather is overcast not much wind 20- 22 degrees The caller states they are concerned about the air quality in area EMDO, wind from the SW 13mph	NW, W, SW	E		
143	1733529	28/08/2019 17:06	Long Plantation	message 17:36	0800 028 1886 message 17:36 YOR odour Transwaste North Ferriby Caller reporting that the smell from Transwaste is there when caller arrived home caller 10 mins drive from the site, caller rated it at 4/6 rotting cheese smell. Weather has been wet but dry at the moment. EMDO: Wind coming from the W, 9mph, light rain. Emailed the site.	NW, W, SW	E		
144	1733627	29/08/2019 08:40	Melton		Yor Odour The caller is reporting the odour from the Transwaste Site on Melton Industrial Estate noticed 5 minutes ago when the caller woke up. The smell is like rotten Garbage. The site is 1.5-2 miles for the caller. The weather is suny still cool and dry. The smell is getting indoors with windows and doors shut the caller thinks it was getting in through the letter box. Sglenville, CO, 29/08/19 - 1 odour report today, SW wind direction light. 14oc at time of call. DConnor / SAdkin attending for odour assessment. Reported at 11:42 that odour substantiated at sandpiper pub area of Melton, 2/6 intensity, continuous.	S	S	Y	

-									
145	01734676 (M)	02/09/2019 11:11	Transwaste	MONTH	SEPTEMBER FIRST OF THE MONTH YOR - Odour Transwaste, Hull Described the smell as a horrible pungent smell. first noticed at 10:45am. The site is a couple of miles away. Rated 4-5 out of 6. windows were closed. Weather is fine, bright, light breeze.	S	S	Y	
146	1734872	02/09/2019 19:43	Long Plantation		YOR-Odour-Transwaste Caller ringing about the odour coming from Transwaste Stating this odour smells very pungent like a rubbish bin The odour was first noticed at 19.00 The caller is around 1 mile away from the site The odour is not inside the property All windows and doors are closed Weather is overcast and has a NE breeze Caller has said the level is around a 3 EMDO: Wind direction from SW, 17mph, partly cloudy. At 20:40hrs emailed the site and asked them to investigate.	NW, W, SW	sw	Y	
147	1734938	03/09/2019 09:28	Melton Hill		YOR - Odour North Ferriby The caller is reporting odour coming from Trans waste. The caller says the odour was affecting them yesterday at 12.00 and was present until 18.00. The odour is reported as being a rotting rubbish smell. The caller says you could even taste the odour. Rated as a 4. The odour was not getting inside as they had windows and doors closed. They are about 2-3 KM from the site. The weather was dry with a slight breeze and overcast. Caller is wondering if we would be able to install monitors in the area? Justin Jones (CO) checked wind data for this time period, 15 to 20mph SW / SSW. Duplicated to first report of the month.	S	sw	Y	
148	1735148	03/09/2019 16:27	Melton Hill		YOR - Odour - Melton Hill - Odour from Transwaste. Described as like a sickly-sweet smell. Putrid. Horrible. Distance to site is about 1 mile. First noticed at 14:30 on the 03/09/2019 when returning home. Odour has not entered the property with all windows closed. Odour rated 4 out of 6. Weather is a light south westerly wind and quite bright. Caller advised this has been really bad last week for the couple of warm days.	S	SW	Y	

					CO: A check of www.xcweather.co.uk confirmed that the wind direction is either SW or WSW dependent on the weather station location, making the permitted site the probable source of the odour. Site contacted by email requesting an investigation and provision of feed back to the Environment Agency.				
149	1735152	03/09/2019 16:42	Melton Hill		YOR Odour Caller is reporting the odour from Transwaste described as household waste and rated as 3/6. It is not inside the home with the windows closed. The caller is 1 mile from the site and the weather is cloudy, a SW breeze and clear. The caller noticed at 16:15. it is a regular occurrence they report. CO: A check of www.xcweather.co.uk confirmed that the wind direction is either SW or WSW dependent on the weather station location, making the permitted site the probable source of the odour. Site contacted by email requesting an investigation and provision of feed back to the Environment Agency.	S	sw	Y	
150	1735385	04/09/2019 14:04	Long Plantation		YOR - Odour - Transwaste FEEDBACK REQUIRED Smells of being on a landfill site. Scale 6 Caller has just got home. It is bad now. Caller cannot say when it began Odour is in the house. Windows were closed Caller lives half mile from the site It is very breezy There were no odours earlier this week	NW, W, SW	W	Y	
151	1735420	04/09/2019 15:43	Long Plantation		020302 58149: YNE: ODOUR: Caller reports the smell again from Transwaste on Gibson Lane, HU14 3HH This was noticed at about 2pm and is still evident at the moment The odour is described as "pungent odour worse than the rubbish bin" and rates as 4/6. The smell is obvious inside the property which is about a mile from the site. Having to keep doors and windows closed where possible. Weather conditions are cloudy with a gusting NE breeze. Location: Corby Park, North Ferriby.	NW, W, SW	W	Y	
152	1736928	10/09/2019 19:24	Long Plantation	Transwaste	0800 028 1886 Yor odour from Transwaste Thinks it's at Melton. The site is about 2 miles away. Just noticed it, might have also been about this afternoon. Outside only windows closed. Rated as a 5. Described as a sour smell, like milk. The weather is calm and pleasant. RG (EMDO) Wind direction for North Ferriby is WSW so site is upwind of reporter	NW, W, SW	w	Y	

153	1737559	12/09/2019 16:18	Melton	reporting the odour from Transwaste	<ul> <li>ml 16:36 - YOR: Odour. Caller is reporting the odour from Transwaste close to Brickyard Iane. Noticed while walking.</li> <li>what three words app location is: snippets. ordering. watched</li> <li>Noticed it just now, westerly wind blowing in the caller's direction from the site while walking down Brickyard Iane.</li> <li>Rates severity as a 3/6. Describes the smell as sour taste. Caller is about 1/2 a mile from the site.</li> <li>P MARRIS (EMDO) - cat 3 on hold and sent to Steve Taylor</li> </ul>	S	sw	Y	
154	1737892	13/09/2019 18:39	Melton Hill	Odour	0800 028 1886 Industrial Action YOR - Odour A caller is reporting an odour from Transwaste. It is a 'noxious waste' smell. The odour was noticed about an hour ago. The site is roughly 2 miles from the reporter. The odour was rated 4.5-5/6. The odour was entering the building when a door was open. The weather is warm, sunny with no wind. EMDO: www.timeanddate.com - wind NNW, 8.7mph, fair. Odour likely to be substantiated.	S	changeable	Y	
155	1737900	13/09/2019 19:33	Long Plantation	ODOUR	0800 028 1886 Industrial Action YOR - ODOUR Calling to report the odour coming from Transwaste - reprocessing waste plant. First noticed around 18:00pm Caller could smell it around the villageHigh Road, Church road. Describes the odour as a very strong pungent smell - chemicaltype odour. It is different to the usual rotting type odour Rates 4/6 Caller could smell it outside Caller was about 1 mile from the site. Weather conditions were light wind, overcast. Caller thinks they are exceeding their storage limits. EMDO: Wind direction from E, 9mph, fair conditions. Odour possibly from site.	NW, W, SW	changeable	Y	
156	1737913	13/09/2019 20:54	Long Plantation	YOR - Odour -	0800 028 1886 Industrial Actions YOR - Odour - Caller reporting odour coming from Trans waste composting Described as a dirty smell of rubbish First noticed an hour ago Smell starting to permeate into house. Noticed smell when caller went outside and it was strong Weather described as normal September evening Caller is about 1 1/2 - 2 miles Rated at 4/6 EMDO: Various wind directions, 1 mph, fair conditions.	NW, W, SW	changeable	Y	

					YOR odour from Transwaste - North Ferriby				
157	1738136	15/09/2019 10:25	Long Plantation	Ferriby	Thinks the site is about a mile away. First noticed at 08.00. Rated as a 3. Described as a strong sickly smell. Also, an acrid smell. Slightly winds gusting. The smell is outside only, the house is closed up. More noticeable at the front of the house, persisted from 08.00,	NW, W, SW	w	Y	
158	1738576	16/09/2019 21:12	Long Plantation	Plantation -	<ul> <li>YOR - Odour Complaint - Long Plantation -</li> <li>Caller reporting a rotting smell from Transwaste Recycling and Aggregates Ltd - EPR/BP3792LD</li> <li>This was first noticed today from 18:00pm 16/09. The site is 1 mile from the caller's address. The smell is rated at 6 out of 6 on our scale and takes the caller's breath away. The smell has entered the caller's property through open windows, now closed. The weather is dry, calm, with a westerly wind.</li> </ul>	NW, W, SW	changeable	Y	
159	1738950	18/09/2019 09:41	North Ferriby	Odour	M/L 09.50 10:06 02030258149 Yorks - Odour Location: North Ferriby Caller is reporting odour from Transwaste. Caller describes the odour as household waste, sweet, bins. First noticed at 09.00. Caller is a mile from the site. Odour isn't inside the property, doors and windows closed. Weather conditions are still, sunny, dry, warm. Caller rates the odour as a 6 on the scale. Ongoing issue. CO: 5mph WWS, placing reporter down wind of site.	W	w	Y	
160	1738968	18/09/2019 10:09	Melton Hill		YOR - Odour From Transwaste The caller rang to report an odour from Transwaste The caller describes the odour as Rancid smell - worse than the smell of food going off The caller noticed the odour at 08:00 The caller states their property is a 1 mile from the site The caller states the odour is getting into their property - windows and doors open The caller states the weather is still The caller states the odour is a 5	S	sw	Y	
161	1739310	19/09/2019 08:45	Long Plantation		YOR - Odour - Long Plantation - Odour from Transwaste in North Ferriby. Described as like a sickly smell. Not like manure. First noticed at 08:40 on the 19/09/2019 when going out to the bin. Distance to the site is about a 20 minute walk. Caller advised the back door was open when first noticed but now all windows and doors closed. Odour rated 6 out of 6. Weather conditions is sunshine, blue sky and a mild wind.	NW, W, SW	sw	Y	

					IM (CO) wind direction Westerly at 4mph. Supports odour from alleged site affecting the reporters location. Emailed site.				
					YOR - Odour				
					Possibly Transwaste Site, Hull				
					smells like a burning smell.				
162	1741543	26/09/2019	Melton		First noticed at 6.30pm.	S	S	Y	
		19:19			The site is around 1/4 of a mile away				
					Rated 5 out of 6.				
					The smell is inside the house, windows are closed.				
					Weather is wet, still.				
					020302 58149: YORKS East: Odour / Burning of Waste:				
164	1741580	27/09/2019 07:13	Melton	Burning of Waste:	Caller reports the smell again from Transwaste at Melton. This was noticed at 7am. The odour is described as "the smell of burning" and believes that there must have been a fire again. Caller feels that fires are occurring more often at the site recently. The smoke is blowing across from the direction of the site - looks like fog in the air. The smell is obvious at Monks Way which is closer to the site than the callers house. Weather conditions are fine and dry with a slight breeze.	S	S	Y	
					Location: Monks Way Melton, North Ferriby.				
165	1741630	27/09/2019 09:47	Low Field Farm		L/M @ 10:13 - +442030258149 YOR - Odour Location: North Ferriby A caller is reporting an odour from Transwaste. There is an intermittent methane/chicken farm smells which come from the site. Today there is a smell of smoke coming from the site. Unsure if there is a fire at the site. The odour was noticed at roughly 08:00. The site is roughly 1/4 of a mile from the reporter. The odour was rated 6/6. The odour is entering the building with windows shut, it is only faint inside the building though.	SSE	S	Y	
166	1741635	27/09/2019 10:04	Low Field Farm		YOR. Odour. Caller reports what smells like a fire of some description emanating acrid smoke. It seems to be coming from the rear of a waste transfer site called Trans Waste about half a mile away. Caller says it is 3/6 on smell scale. The smell was getting inside the house this morning. Caller had windows open during the night but has had to close them. This is the second time in the last couple of months caller	SSE	S	Y	

					has noticed this. Caller says it is not a regular occurrence before that. Caller does not know what is being burned and cannot see the fire itself. Caller has also reported this to the Local Council.				
167	1741961	28/09/2019 17:03	Long Plantation		YOR - Odour Transwaste, Hull Smells like acrid burning plastic/rubber. First noticed at 11am, been constant since. The site is around half a mile away. Rated 5 out 6. The smell is inside the house, windows are open. Weather is quite humid, light breeze.	NW, W, SW	SW	Y	
168	01744904 (M)	09/10/2019 13:01	Transwaste		YOR - Odour Transwaste, Hull. Described the smell as like stinking rubbish. First noticed at 12:55pm. The site is around 1.5 miles away. Rated 3/4 out of 6. The smell isn't inside the house, windows are closed. Weather is cloudy, breezy. CO www.xcweather.co.uk checked. Wind direction at Leaconfield; 10:50hrs WSW 16-28mph, 11:50hrs WSW 17mph, 12:50hrs WSW 16rph. The location of the odour report is potentially downwind of the permitted site. A check of other incidents confirmed that there have been no other odour reports within the last 7 days. Likely localised impact, report suggests odours detected outside rather than inside a property. Site notified via email and asked to investigate.		sw	Y	
169	1746456	16/10/2019 15:13	Long Plantation	Ferriby	Yorkshire - Odour report - North Ferriby Caller is reporting odour from Trans Waste Rubbish tip like smell that was first smelt at 13.30 Caller is currently doing the school run and is less than half a mile away from the site and they can no longer detect the odour however it is very strong at home. Weather is cool and clear with a slight breeze. Windows and doors are closed but the smell has entered the house already Odour rated as 5.5	NW, W, SW	w	Y	
170	1746470	16/10/2019 15:44	Transwaste		YOR - Odour Taking Place Near Melton Hill Caller reporting an odour.		w		

					The site is possibly Trans waste Recycling. The odour is like rotting decomposing food, sulphur, egg smell. Caller noticed the odour at 13.00 and could still smell it at 15.15. The site is a about 1/2 mile. The odour is not getting inside the property it can only noticed outside. Weather is sunny and cloud, but there westerly wind. Caller would rate the odour at a 4				
171	1747100	18/10/2019 12:45	Transwaste	Complaint - Via Email -	<ul> <li>+448000281886 - YOR - Odour Complaint - Via Email -</li> <li>Once again, there was a foul smell this morning coming from the industrial estate near our house in Melton. It smells like the smell you used to get from the landfill that you pass on the a63 just past north cave, is that a methane smell? It really feels like you are breathing in poor air quality.</li> <li>Anyway, it keeps happening and is really disgusting and nausea inducing. You could smell it a little in North Ferriby village as I did the school run and then it was worse on the a63 past my housing estate/the industrial estate and then stopped before the brough turn off.</li> <li>Please could this be looked into, as it is not nice living next this.</li> <li>We are on the edge of Melton Industrial Estate, where there are two waste recycling businesses, one of which is Transwaste.</li> <li>The foul smell continued all day and really was terrible. All</li> </ul>		sw		
172	1748038	23/10/2019 15:03	Long Plantation		of our house windows have to be closed when this happens. YOR - Odour - Transwaste Noise was of heavy machinery within the building. It was continuous and loud. It was a roaring noise It has been on and off for some time. Sometimes the caller tolerates it They often have wagons going to the site at 0400hrs. Caller says they shouldn't operate before 0600hrs It was bad for the past two nights It can be heard in the house with windows closed It stopped the caller going to sleep It doesn't cause vibrations It can also be heard throughout the day, as caller is often at home Caller lives between quarter and half a mile from the site Caller thinks that the times they do operate is a breach of permit CO: Reporter 1600m from site, unable to assess weather conditions due to delay between observation and report.	NW, W, SW	S	Y	
173	1749333	28/10/2019 08:18	Long Plantation		02030258149 Yorks - Odour - Caller reporting odour from Trans waste first noticed at 0815 It's very sickly and cloying. It's almost chemically Caller is about a mile from site Smell in house when windows are opened	NW, W, SW	W, SW	Y	

					Weather described as dry and frosty. It's still Odour rated at 6/6				
174	1749340	28/10/2019 08:37	Long Plantation	Plantation	02030258149 YOR Odour Long Plantation The caller is reporting an odour coming from Melton. Caller was unsure of the name of the site but knows it's a site that is a regulated. It smells like a really obnoxious gas. Gets to the back of your throat. The caller is about 1 mile or less away from the site. The odour is getting inside the house Windows and doors are currently closed. The weather conditions are chilly, bright, and still morning. The caller rated the odour as 6/6	NW, W, SW	w, sw	Y	
175	1749350	28/10/2019 08:51	Long Plantation	Plantation	02030258149 YOR Odour Long Plantation The caller is reporting an odour coming from trans waste site. It's a rotting waste and composting obnoxious odour. The caller had the windows and doors open and now the smell is in the house. The windows and doors are closed now The weather conditions are slightly breezy. The caller rated the smell as 6/6 the site is just over a mile away	NW, W, SW	W, SW	Y	
176	1749456	28/10/2019 11:18	Long Plantation		YORKS - Odour, Hull Caller reports their property being affected by a strong odour emitting from Transwaste in North Ferriby, located approximately 1 mile away. Caller says that the odour was already present inside their property when they got up this morning at 7am, as their windows had been open overnight. Caller describes the odour as a "waste" smell, similar to a dirt dustbin and rated at around 5/6 in intensity. The smell has been present "on and off" recently but is said today to be "excessive". The weather is very cold, bright and still today.	NW, W, SW	N	Y	
177	1750362	31/10/2019 16:46	Brough, HU15 1GP		YOR - ODOUR - BROUGH Could not change time observed as NIRS would not allow Caller wanted to report smell coming from Transwaste in Melton, East Yorkshire, Customer was calling from postcode HU15 1GP Caller would not give their residence details Caller said it smelt like rubbish landfill smell Caller said they first noticed smell at 1700hrs and just noticed when they returned from work Caller said the site is about a mile from their location Caller said the smell was not getting inside the house Caller however, said during the call they were now smelling inside the house - like a sulphur smell	SE	SE	Y	Millias CL, Brough

					Caller said the windows and doors are being kept closed Caller said the weather was still with east south easterly light breeze Caller described the smell as 2 to 3 out of 6. Said it was very distinct and can be smelt from car when driving. CO: Unable to assess due to discrepancy between observed time and time recorded in free text, unable to contact reporter to clarify as no details provided.				
178	01753371 (M)	11/11/2019 10:46	Long Plantation	Odour- North Ferriby	<ul> <li>Msg @ 11:00 +442030258149 YOR- Odour- North Ferriby **** Feedback requested****</li> <li>caller is reporting odour coming from Trans Waste located on Gibson Lane, Melton Industrial Estate.</li> <li>the odour is described as chemical, foul and sickly smell.</li> <li>the odour was noticed just now in the bathroom by the windows and vent.</li> <li>the site is located about 1/2 to 1/4 mile away across the field.</li> <li>all the windows are closed apart from the bathroom one that has a vent on it.</li> <li>the weather is dry, fairly still and light breeze. caller rates the odour as 5/6.</li> <li>CO - weather light cloud, moderate breeze, 15mph westerly. Site would be upwind or reporter's location.</li> </ul>	NW, W, SW	W	Y	
179	1753483	11/11/2019 13:50	Long Plantation		YOR- Odour- North Ferriby. caller is reporting odour coming from Transwaste Recycling And Aggregates Ltd, Gibson Lane Site - EPR/BP3792LD. the odour is described as sewage, rotting waste food smell. the odour was first noticed about 12:00 when come back home, and the odour is still currently present. the site is located under a mile away. the smell is getting inside the house with the windows and doors closed. the weather is slight breeze and dry. caller rates the odour as 6/6. CO - 16mph, westerly. dry, light cloud.	NW, W, SW	W	Y	
180	1754036	13/11/2019 11:34	Transwaste	Hill	+442030258149 - YOR Odour Melton Hill Caller reported odour coming from Transwaste site at around 10.30 today Caller stated that they are 1mile away Caller described the odour as rotting dustbin , methane gassy odour Caller stated that the odour is an ongoing problem Caller stated that the weather today is sunshine, bright low wind but cold and still Caller has had to keep all doors and windows closed to keep the odour out Caller would rate the odour as 3/6 on the scale		sw		
181	1758603	01/12/2019 12:31	Long Plantation		Yor - Odour Willerby Recycling: Brickyard Lane Industrial Estate, Brickyard Lane, Melton HU14 3LH	NW, W, SW	NW	Y	

					Call received to report odour coming from Willerby Recycling in Melton. Reporter says it smells like rotten waste/landfill. It was first noticed at 10:00 today. The site is about half a mile away. There is no odour inside the house. Windows and doors are closed. The weather is westerly breathe. Reporter rated the smell as 4. P MARRIS (EMDO) - Dominant weather is westerly approx 1mph at time of notification				
182	1758851	02/12/2019 14:38	Long Plantation		YOR - Odour from Trans Waste The caller rang to report an odour from Trans Waste The caller describes the odour as the smell from a bottom of a dust bin The caller states they noticed the odour at 06:30 - but present of the since last Thursday The caller states their property is 2 mins drive away from the site The caller states the odour is getting into their property - windows and doors open The caller states the weather is cold and dry The caller states the weather is cold and dry The caller states the odour is a 6 Sglenville CO, @ 14:54 on 02/12/19 - wind direction WNW, 2.6 m/s. Dry, clear, still. Single report - wind direction conducive. cat 3 on hold at this stage. Operator notified by email at 15:00 hrs.	NW, W, SW	SW	Y	
183	1759058	03/12/2019 11:15	Melton Hill	North Ferriby -	YOR - Odour - North Ferriby - The caller is reporting on an odour from Transwaste. The smell is described as sour, sweet unnatural smell. This was first noticed at 11:00. The caller is 1.5 miles from the site. The odour is rated as 4/6. The smell is not getting inside the property with the windows and doors closed. The weather conditions today are dry and still.	S	S	Y	
184	1759100	03/12/2019 13:05	Long Plantation		Yor Odour The caller is reporting a smell which may be from Transwaste, which has gradually been getting worse since last Thursday. The smell is like excrement which has been warmed up 10 times until it goes really creamy. The smell seeps in if you are going in and out of the house. The weather is 3 degrees still and dry. The caller scored the smell as 11/6 for intensity terrible.	NW, W, SW	sw	Y	
185	1759146	03/12/2019 15:02	Long Plantation		YOR - Odour - North Ferriby. caller is reporting odour coming from Trans Waste.	NW, W, SW	SW	Y	

				the odour is described as strong smell of rubbish. caller says is like seating next to a rubbish bin. the odour as has seen going on for about an hour. the site is located about a mile away. the odour isn't getting inside the house. the windows and doors are closed. the weather is very still, damp and clear day. the odour is rated as 5/6.				
186	1759182	03/12/2019 16:03	Long Plantation	YOR - Odour from Transwaste The caller to report an odour from Transwaste The caller describes the odour as methane The caller states they noticed odour at 08:00 The caller states their property is 3/4 mins drive away from the site The caller states the odour isn't getting into their property The caller states the weather is fresh and crisp, no breeze The caller states the odour is a 6	NW, W, SW	SW	Y	
187	1759421	04/12/2019 12:28	Melton Hill	YOR - Odour - Melton Hill - Caller reporting an odour from Transwaste. Described as a putrid smell of food/waste. Odour rated 6 out of 6 Distance to the site is about 1/4 to 1/2 a mile Odour kept out of the property with all windows and doors closed. Caller advised the odour has been there for a few days. First noticed on the 04/12/2019 at 08:30. Weather conditions is clear blue sky, sun out, cold and dry. SR - CO. SW wind blowing which indicates correct direction from site.	S	S	Y	
188	1759790	05/12/2019 16:12	Transwaste	YOR- Odour Transwaste North Ferriby The caller advised a rotten smell was coming from Transwaste yesterday and noticed that about 3.45pm The odour was detected outside. It wasn't inside the caller's property. The caller advised no wind and a cold and crisp day. The caller rates 4/6 for the intensity.		S		
189	01767575 (M)	08/01/2020 09:08	Aggregates	FIRST OF THE MONTH YOR - Odour - North Ferriby caller is reporting odour coming from Trans Waste. the odour is described as refuse, sickly and dust bin smell. the odour was first noticed about 5 minutes ago. the site is located about a mile away. the odour isn't getting inside the house. the windows and doors are kept closed. the weather is dry, gentle breeze from south west. the odour is rated as 3/6.		SW		
190	1768303	10/01/2020 10:42	Long Plantation	YOR - Odour - North Ferriby	NW, W, SW	w	Y	

					Caller reports an odour from a Transwaste site that smells like rotting waste.				
					Caller reports that Transwaste are approx half a mile away and open fields between them.				
					Caller reports that the odour is not entering the property because the doors and windows are closed.				
					Caller was in the garden but he can't be anymore because it makes him feel so sick.				
					Caller rates the odour as a 4.				
					Caller says there's a slight westerly breeze and is bright and clear.				
					Transwaste - Gibson Ln, North Ferriby, Melton HU14 3HH.				
					RG(EMDO) Wind direction according to Windy.com is Westerly, which puts reporter downwind of Transwaste. Substantiated and site informed				
					Odour - Yorks				
191	1768396	10/01/2020 13:41	Melton Hill		The caller says that there is an odour coming from Transwaste waste processing site, the odour is described as rotting household rubbish The smell was noticed around 13.30 today but this is an ongoing problem and the site is not keeping within its permitting requirements. The site is roughly a mile away from the callers property and the smell isn't as strong as it has been but it is still there, it isn't getting into the house but the doors and windows are kept closed. There is a slight breeze from the south west but the site is N/E from the callers property and the smell is rated at a 3 RG (EMDO) Wind direction at 14;00 is W according	S	sw	Y	
					Windy.com. Site agreed with previous report. Site to be e- mailed				
192	1768435	10/01/2020 14:56	Long Plantation	Caller reporting odour coming from	020302 58149: YOR - Odour Caller reporting odour coming from Transwaste in North Ferriby, this is 2-3 miles from callers address. First noticed midday and has gotten worse Described the odour as burning stuff smell and gone waste smell. Odour outside with window and doors closed. Smell intensity: 3.5/6 Weather Conditions: 7degrees and hardly any breeze	NW, W, SW	sw	Y	
					YOR - Odour from Transwaste				
193	1771061	19/01/2020 10:16	Long Plantation		The caller rang to report an odour from Transwaste The caller describes the odour as rotting waste, sweet horrible smell The caller states they noticed the odour at 09:45 The caller states their property is 3/4 mile away from the site The caller states the odour isn't getting into their property -	NW, W, SW	changeable	Y	

					windows and doors closed The caller states the weather is north westly breeze, clear and cold The caller states the odour is a 5				
194	1771077	19/01/2020 11:59	Long Plantation		YNE: ODOUR: Caller reports the smell again from Transwaste at Brick Yard Lane. This was noticed at 11.45am. The odour is described as "rotting stinking rubbish" and rates as 5/6. The smell is obvious outside the property which is about 2 miles from the site. Weather conditions are fine and dry - cool with a slight westerly breeze. Location: Southfield Drive, North Ferriby.	NW, W, SW	w	Y	
195	1771244	19/01/2020 19:56	Long Plantation	North Ferriby	ml 20:10 - 0800 028 1886 - Y - Odour - North Ferriby The caller is reporting an odour coming from Trans Waste It smells like Hydrogen Sulphide but was different today The site is 2 miles away The odour was first noticed this evening The odour rates as a 3/6 The odour does getting into the house with windows open The weather is still and cold They are not supposed to be working today	NW, W, SW	S	Y	
196	1771367	20/01/2020 07:50	Melton Hill	North Ferriby -	0203 0258149 YOR - Odour - North Ferriby - The caller is reporting on an odour from Transwaste in Melton. The smell is described as sickly rotting waste. The smell is not getting inside the property with the windows and doors closed. This was first noticed at 07:20. The odour is rated as 5/6. The caller is 1 mile from the site. The weather conditions today are dry with a gentle SW breeze.	S	S	Y	
197	1771680	20/01/2020 15:18	Long Plantation		YOR- ODOUR- LONG PLANTATION Caller is ringing to report an odour coming from Transwaste Recycling & Aggregates Ltd, HU14 3HH. The odour is described as a chemically, manure, horrible smell which sticks in the back of your throat. The odour was first noticed around 3:15pm today. The caller is around 1 mile from the site The odour is getting inside the property with the doors and windows closed.	NW, W, SW	sw	Y	

				The weather conditions are bright, sunny and fine, with a westerly breeze.				
				The odour is a 5 on the scale.				
				EMDO - wind direction WSW - 10mph so reporter is downwind of the site.				
				YOR - Odour				
				Trans Waste, Hull.				
				Described as household waste.				
		20/01/2020		First noticed at 5.30pm.				
198	1771845	17:52	Melton Hill	The site is over a mile away.	S	SW	Y	
				Rated 4 out of 6.				
				The smell isn't inside the house, windows are closed.				
				Weather is clear, cloudy, mild breeze.				
				YOR - Odour from Transwaste				
199	1771859	20/01/2020 18:00	Melton Hill	The caller rang to report an odour from Transwaste The caller describes the odour noxious, horrible smell The caller states they noticed the odour at 10:30 The caller states they were walking not far from the site The caller states the weather is crisp and cold , sunny no rain The caller states the odour is a 6	S	sw	Y	
				YOR - Odour - North Ferriby				
200	1772677	22/01/2020 11:29	Long Plantation	Caller is reporting the odour from Transwaste. This is happening almost daily recently and caller is logging with us often. Today they noticed it about 11:15 upon leaving the house. It smells of sour mash, like silage that's going off. It's not pleasant. The smell is now getting indoors. The site is about 3/4 of a mile away to the west. There is little wind to speak of, very light, warmer today, about 8 degrees. Rated 4/6 today.	NW, W, SW	sw	Y	
				EMDO(KP): Wind from west, so report likely to be substantiated as downwind of the site. Emailed the site at 12:47hrs requiring them to carry out checks and provide feedback.				
				Transwaste Odour - 1st of the month				
201	01777750 (M)	05/02/2020 23:18	Long Plantation	02030258149 Yor Odour	NW, W, SW	w	Y	
				The caller is reporting an odour from Trans waste, 15 minutes ago, the caller popped out with the dog. The smell is like a gassy smell like town gas and rotting				

-									
					flesh. The caller is about 3/4 of a mile away, the weather is calm cold and dry. The caller scored the smell as 4/6 the caller could still breathe and didn't feel the need to cover their mouth. The smell is not getting indoors with the windows and doors shut.				
202	1780057	10/02/2020 16:31	Long Plantation		Yor- Odour- Long Plantation Caller is reporting odour from Transwaste It smells like rotting food waste The smell was first noticed at 3pm today The site is about 0.5 miles away The odour is getting into the house Caller is keeping all windows and doors closed Current weather is cold and there is a mild breeze Caller would rate the odour at a 6 RG(CO) Wind direction is currently Westerly at 20 knots, putting the reporter downwind of Transwaste	NW, W, SW	W, SW (gust all day)	Y	
203	1785597	25/02/2020 17:23	Long Plantation	Ferriby	YOR - Odour - Transwaste - North Ferriby Caller reporting the odour coming from Transwaste Caller rout walking the dog and can smell this This is a highly offensive odour The site is around a mile away 4/6 Caller rated the smell The smell is not in the house Weather is clear and slight breeze	NW, W, SW	S, SW (gust wind 40mph)	Y	
204	1788365	05/03/2020 18:00	Melton Hill		Left msg 18:16 YOR - Odour A caller is reporting an odour from Transwaste. It is a sickly, pungent smell. It is making the caller feel sick. This was noticed just now. The site is roughly 3/4-1 mile from the reporter. The odour was rated 6/6. The odour is not entering the building with windows shut. The weather is cold and still. EMDO: 9mph NNE, placing reporter upwind of named site.	S	N		
205	1795675	06/04/2020 18:00	Long Plantation		YOR/ODOUR Caller reporting an odour from Transwaste Odour smells like excrement and landfill methane smell. They have a bio-waste function on the site, Noticed at 11.00hrs and its been continuous up until 17.30 hrs It has just started today as the wind has changed direction and its now a westerly wind and this is when they incur the smell from this site. Has it been present for a few days Odour can be smelt inside the property with the doors and windows closed Weather is dry sunny and a westerly breeze. Rates 5 Very strong (odour that makes you want to leave the area) Caller lives approximately 3 quarters of a mile from the site.	NW, W, SW	sw	Y	

					Call taken @18.00 on 06.4.2020				
					Justin Jones (EMDO) wind direction predominantly W at approx. 10 to 15 mph				
206	1796453	08/04/2020 17:07	Long Plantation	Odour	0800 028 1886 MSG: 17.38 Yorks - Odour Location: North Ferriby Caller reporting an odour coming from Transwaste on Gibson Lane Noticed just now (5pm) Described a very strong, sweet, sickly smell The caller is around a mile away from the site Can't be smelt inside the house unless any windows are left open Rated at 5/6 Current weather conditions are fairly warm, sunny and still EMDO: 6mph SW, placing reporter downwind of named site.	NW, W, SW	changeable	Y	
207	1808617	21/05/2020 10:29	Melton Hill	2 of 3	X4 08000321631 @ 10.53 Yor Smell 2 of 3 Yesterday there was a smell present from 14:00-15:30 from the Transwaste Site in Melton here was a south west wind and the caller could smell something like incineration in the rear garden. The weather yesterday was hot dry and a light wind. When the wind changed direction the smell went. The caller scored the smell as 4/6 for intensity	S	S	Y	
208	1808618	21/05/2020 10:32	Melton Hill	3 of 3	X4 08000321631 @ 10.53 Yor Smell 3 of 3 The caller is reporting the smell from the Transwaste Site on Gibson Lane in Melton noticed the smell as 10:00. it's the Incinerator smell again, which the caller could smell in their back garden again. The weather is quite cloudy with a very light Westerly wind. The caller scored them all as 4/6 for intensity.	S	S	Y	
209	1809183	22/05/2020 13:35	Melton Hill		YOR - Odour from Transwaste The caller rang to report an odour from Transwaste The caller describes the odour as a burning smell The caller states they first noticed the odour @ 13:30 The caller states they property is a mile away from the site The caller states they can't smell the odour in their property - windows and doors closed The caller states the weather extremely breeze, blue skies, sunshine, mild The caller states the odour is a 4.5 RG (CO) Wind direction according to Windy.com is SW putting complainant downwind of Transwaste. E-mail sent to Transwaste	S	SW (gust wind 40 mph)	Y	
210	1809434	23/05/2020 09:36	Melton Hill		YOR - Odour - Melton Hill Caller reporting a burning odour coming from Transwaste on Gibson Lane in Melton. Reporting a potential burning smell at the same time every morning. Caller has noticed a pattern. noticed at 08:30 this morning.	S	S (gust wind 40 mph)	Y	

					<ul> <li>This has been this time in the morning for the last 7 days.</li> <li>Caller reports the odour disappears soon after, the odour is no longer present at 09:40.</li> <li>Caller is located roughly 1 mile from the site.</li> <li>Caller reports the odour was getting inside the house.</li> <li>Some windows were slightly open this morning.</li> <li>Weather is windy, south westerly wind.</li> <li>Rated a 4 outside.</li> </ul> EMDO (KP): Wind direction according to time and date.com is SW putting complainant downwind of Transwaste. E-mail sent to Transwaste				
211	1809868	25/05/2020 08:55	Melton Hill	Odour - Melton Hill	<ul> <li>left msg 09.05 - 08000281886 - YOR - Odour - Melton Hill</li> <li>Site is named Trans Waste on Gibson lane in Melton. Described as wood smoke smell.</li> <li>EA is aware, the site have wood burners that are causing the odour.</li> <li>Was first noticed today at 09:00.</li> <li>This has been prominent for the last few days, 1 instance was noted at 05:00 on the 23rd. Located 1 mile from the site.</li> <li>Weather is described as warm and clear, south west wind blowing from the site.</li> <li>Odour is not in the house. Windows and doors.</li> <li>Rated as a 2, was rated as a 6 on the 23rd.</li> <li>EMDO (KP): Wind coming from SSW direction; 7mph and 11-200C according to timeanddate.com. Prior to that the wind has been coming from the SW for the past few days. Emailed the site.</li> </ul>	S	S	Y	
212	1814875	06/06/2020 07:45	Melton Hill	YOR - Odour - Melton Hill	ml 08:02 & 08:22 - +448000281886 - YOR - Odour - Melton Hill *Cat 3 - 1st report within 24hrs & 2km* Call received to report odour coming from Trans Waste Gibson Lane Site - EPR/BP3792LD The odour is described as being wood smoke The reporters property is approx 1 mile away from the site in question The odour has entered the reporters property, windows were open & have had to be closed Weather conditions are described as being blustery & damp, wind is from the West Smell intensity is scored as 2/6 RG (EMDO) Wind direction is Westerly, moderate breeze according to Windy.com	S	SW (gust wind)	Y	
213	01825068 (M)	07/07/2020 15:37	Aggregates Ltd	with 2 km of the site.	Yor - Odour - CAT 3 1st Report in 24hr with 2 km of the site. Transwaste on Gibson Lane site is emitting a bad odour, this started about 11 am today. The site is about 0.7 miles across fields from the house The doors and windows need to be closed.	S	changeable	Y	

					There is a gentle westerly breeze with intermittent showers in this period				
					The score of the odour is between 3 /4 - 6				
					The odour is like sweet sickly rotting smell.				
					The odour is constant at present and increase and decreases in intensity.				
					The odour is present today but has not been continual in the last 7 days with the winds blowing from the east/ south.				
					YOR - Odour				
					CAT 3 - First report of odour.				
214	1826824	13/07/2020	Melton Hill		North Ferriby	S	sw	Y	
217	1020024	17:21			Odour coming from Transwaste Ltd. Noticed now at 17:15. The odour is not getting inside their property, noticed as they stepped outside. Described as a household waste smell. Rated as a 4. The caller is about a mile from the site. The weather is south westerly and a fair breeze, overcast.	Ū			
					YOR odour CAT 3 1 duplicate				
215	1826880	13/07/2020 22:14	Long Plantation		This is from Transwaste. The site is about 1 mile away. Gibson's lane. Rated as a 4, described as a sweet sickly composting smell. The weather is still and dry. The smell is only getting in the house a small amount. Windows closed.	NW, W, SW	w	Y	
					There is also a noise, but can't be sure if from the site, it is a humming noise and a rumble. They will speak to Env health about this due to the uncertainty.				
					EMDO - checked wind direction WSW 7mph				
					YOR- Odour- Long Plantation Cat 3 minimal impact, 3rdt report.				
216	1827254	14/07/2020 21:09	Long Plantation	minimal impact, 3rdt report.	Caller reported a foul odour from Transwaste, MELTON WASTE PARK GIBSON LANE MELTON EAST YORKSHIRE HU14 3HH The odour is described as rotting waste. This is a recycling company. This has just been noticed. The site is a mile from the callers property. The smell does not get in the house with the windows and doors closed. The weather is fine and still. The odour is rated as 5/6.	NW, W, SW	w	Y	
					EMDO - checked wind direction W 8mph				
217	1827549	15/07/2020 17:23	Long Plantation	1st report in 24 hours & 2 km	YOR - odour - Long Plantation Cat 3 1st report in 24 hours & 2 km	NW, W, SW	w	Y	

-									
					The caller is reporting a nuisance odour from Transwaste on Brickyard Lane, Melton. It's a waste disposal centre (Gibson Ln, North Ferriby, Melton HU14 3HH)				
					The odour is like a very acrid stench that makes you feel sick				
					The caller says the odour has been fairly consistent over the last 2 weeks and is gradually becoming worse				
					The caller is about a mile away from the site				
					The odour is getting inside the caller's house if their windows are open				
					The weather is overcast and drizzly, there is no wind				
					The caller rates the odour as a 6				
					Sglenville, emdo, 15/07/20 - single report, wind direction westerly, 3.6 m/s. Cat 3 no attendance on this basis. Operator notified at 07:15 on 16/07/20.				
					Yorkshire - Odour - Long Plantation cat 3 2nd report in 24 hours & 2 km				
					Caller states the odour is coming from the Transwaste site				
					The address for this is Gibson Lane, Melton HU14 3HH				
					The site is a transfer station				
					Caller states the odour is coming in with the breeze				
					Caller states the odour is like off cheese				
		16/07/2020		cat 3 2nd report	Caller states the odour has been bad all week				
218	1827892	16:35	Long Plantation	in 24 hours & 2 km	Caller states they have only just noticed it at 16.35	NW, W, SW	W	Y	
					Caller states less than a mile as the crow flies				
					Caller states the odour is not getting into the house, the patio door is open				
					Caller states the weather is quite warm, with a breeze				
					Caller states the odour is a 2 out of 6				
					Sglenville, EMDO, 16/07/20 - 17:13 hrs - 2nd reprt in 24 hrs, cat 3, wind direction WNW, 2.9 m/s. No further reports overnight, no attendance necessary. Operator notified of report at 07:31 hours on 17/07/20 by email.				
					YOR - Odour - Melton Hill				
220	1828045	17/07/2020 09:41	Melton Hill		CAT 3: 2nd odour report in 24 hours.	S	w		
					Odour coming from Trans Waste Melton.				

	-								
					Gibson Lane Site - EPR/BP3792LD SE9682825546				
					Odour is described as a house waste recycling, smells like that. First noticed at 08:40. Odour has been present all week, 2nd time caller has rang. This is odour is on and off depending on wind direction. Caller is located 1 mile from the site. Odour is getting inside the house. Windows are open. Weather is described as partially cloudy, warm and south west wind. Rated a 3. SR. Westerly wind indicating site is probable source.				
221	1829723	22/07/2020 17:58	Melton Hill	report	YOR - Odour - Transwaste - cat 3 - 1st report Caller rang in to report odour from Transwaste , Gibson Lane, Melton, HU14 3HH It is a recycling centre , a house hold green bin waste The odour is described as "sticking your nose in a non recycling bin", it is offensive stuff that cannot be recycled Caller noticed at 17.45 on the 22nd of July 2020 Caller lives a mile away from the site There is no odour indoors Doors and windows are closed Caller says they are working in total breach of their permit and it is time the EA and the council did something about it. They work with the doors open last Friday and the place is riddled with holes with waste piled high outside Weather is currently cool, cloudy and slight breeze from the southwest Odour is rated as a 4	S	w		
					EMDO - checked wind direction, SW at approx 5mph consistent with direction from site to customer's property. Email sent to site as per instructions in local issues.				
222	1830644	25/07/2020 15:06	Long Plantation	hours - Long Plantation -	<ul> <li>YOR - Odour CAT3 1st report in 24 hours - Long Plantation</li> <li>Caller reports an odour from Transwaste, HU14 3HH, about three quarters of a mile to a mile away It smells like a tip</li> <li>EMDO - Wind W at approx 5 mph. Email sent to site from EMDO account, NIRS passed to local site officer. It is an ongoing problem</li> <li>It has been lingering for a few days, on and off</li> <li>The odour is not getting into the property as the doors and windows are closed</li> <li>The weather cloudy with a bit of sun and a moderate breeze from the southwest. It is about 23 degrees Celsius The caller rates it as a 2</li> </ul>	NW, W, SW	W	Y	
223	1830727	25/07/2020 23:38	Melton Hill	Transwaste CAT 3 1 duplicate	YOR odour Thought to be from Transwaste CAT 3 1 duplicate Can't be sure it is from that site, but says the smell is	S	S	Y	

					widespread around the area, definitely not a local bonfire. Says it is an acrid burning waste or bonfire smell. Rated as a 6, says it comes in the house windows open. The caller thinks they are about a quarter of a mile from the site. The caller is due east of the site. Usually a prevailing wind from the west. The weather is pleasant with a bit of breeze and warm.				
224	1830784	26/07/2020 11:27	Melton Hill	Cat 3 - 1st Report today	YOR - Odour - Transwaste Cat 3 - 1st Report today Smell is of household waste. Scale 4 First noticed today at 1000hrs. Odour is still present Odour is in the house. Windows are open Caller lives a mile from the site It is breezy today This is the fifth day in a row it has been bad. It is a regular issue Overnight there was a wood burning smell. This is suspected to have been happening at the site Caller says that this could be smelled in the house with the windows closed EMDO - wind W at 5 to 10 mph. Email sent to site from EMDO account, NIRS passed to local site officer.	S	SW	Y	
225	1831445	28/07/2020 14:46	Long Plantation	Cat 3 minor impact	Yorkshire - Odour - Long Plantation Cat 3 minor impact Name of site - Melton Waste and Recycling - caller is unsure what the site processes Distance - approx. 1 - 2 miles Odour - like a farm - bad manure smell First time reported this but has noticed before and Council advised to call EA Doors and windows closed as s=]odour is getting in the house Weather - gusty wind which is making the smell worse - don't smell everyday Scale - 4	NW, W, SW	W (gust wind all day)	Y	
226	1831481	28/07/2020 15:42	Long Plantation	Gibson way cat 3 minor impact	YOR- Odour - Trans waste site on Gibson way cat 3 minor impact Caller is reporting a bad odour from this site last night at around 23:00pm Caller rates the odour a 4/6 The caller describes the odour as a burning plastic The odour was experienced outside the house at the time when reporter was walking dogs The site is around 0.7 away from reporters house Reporter describes the weather as a slight breeze from the west the speed is unknown Caller states that the sky was pretty clear with some clouds	NW, W, SW	W (gust wind all day)	Y	

					The smell was constant when caller got inside their house				
					The smell was constant when caller got inside their house				
					YOR-Odour- Transwaste site, Gibson Lane Cat 3 3rd report in 24 hours & 2 km				
					The site is emitting an Odour				
					The odour is intermittent in appearance but regularly effecting the reporter today				
					Site is around 0.7 miles from caller				
					Caller describes the weather as having a strong Westley windy breeze, reporter is west of the site				
				Lane Cat 3 3rd	Caller has had to shut all windows and doors				
227	1831491	28/07/2020 15:56	Long Plantation	report in 24 hours & 2	Caller scores the odour a 4/5 out of 6	NW, W, SW	W (gust wind all day)	Y	
				nours & 2	The smell is making the caller feel sick				
					Caller states the odour is dependent on the wind, it is worse when it is wet and warm				
					Caller states that the wind speed is around 30mph				
					Caller states the weather is clear with a few showers				
					Caller states it is worse when it isn't windy				
					Caller has been affected every day for the last 7 days				
					Caller states the odour has a rotting sweet smell				
					YOR Odour Long Plantation CAT3 4th report in 24hours and 2km				
					Caller is reporting odour is coming from Transwaste , Gibson Ln, North Ferriby, Melton HU14 3HH				
					Caller stated that they noticed the excessive odour at 5.30PM				
228	1831553	28/07/2020	Long Plantation	4th report in 24hours and	Caller stated that they are less than 1 mile away from the site	NW, W, SW	W (gust wind	Y	
		21:00	, <b>,</b> , , , , , , , , , , , , , , , , ,	2km	Caller stated that the odour is a decaying rubbish, landfill tip Caller stated that they had to close all doors and windows	, , -	all day)		
					closed to keep the odour out Caller stated that the weather was slightly breezy , not				
					raining Caller rated the odour as 4/6 on the scale				
					EMDO - Checked wind direction, W at 10 to 15 mph.				
					YOR. Odour. (Cat 3 min impact - 1st)				
229	1832699	01/08/2020 07:41	Melton Hill		Caller reports a bad acrid wood smoke smell coming from Transwaste about a mile away.	s	s	Y	
					Caller says he had windows open and it has got inside the				

					house. Caller says he has a dry throat and his eyes are sore. 6/6 on smell scale. Warm and still weather. EMDO (KP): Checked weather conditions; wind from SW, 13mph, 63oF, fair. Likely to be substantiated.				
230	1833598	04/08/2020 10:54	Elloughton Hill	CAT 3 1st report in 24 hrs 2 km	YOR/ODOUR CAT 3 1st report in 24 hrs 2 km Caller reporting an odour from Transwaste, Gibson Lane, Melton Odour smells like burning plastic Noticed at 09.30hrs It was present last week just for one day and it normally when the wind is coming from the south. Odour can be smelt inside the property with the doors and windows closed Weather is quite dull and cloudy and breeze from the south with a 12 mile an hour breeze. Rates 4 Strong (odour that may make your hair or clothes smell) Caller lives approximately 1 mile and half as the crow flies from the site. Call taken @ 10.54 on 04.08.2020	SE	S, SW	Y	Elloughton Hill is located 2.5k NW of the site
231	1835268	08/08/2020 10:31	Long Plantation	Long Plantation - cat 3 - 1st report in	YOR - Noise and Odour complaint - Long Plantation - cat 3 - 1st report in 24 hours Noise complaint details: Trans waste, Gibson lane, Melton HU14 3HH. All through night noise - low freq high intensity. like a bass drum but not as loud. went down this morning and doors were open - ducted fans is where the sound emanates from, amplified by building. Operating outside of permitted hours Started this morning about 1.20 and continual Had windows open as hot last night Roughly a mile from the site Machine outside, shed 4 door 2, amber looking machine about 1m in size - separation machine with skip at end. was active this morning and forklifts going in and out with beeping noise - all doors open. roughly 7am. Odour complaint: Prevailing wind from west, very slight breeze. very warm and warm throughout night 19/20 degrees. Odour is slightly diff to usual - rotting vegetation. putrid smell Prevalent when you do down Gibson lane but diminished at Ferriby Around a 4 or 5 on the odour scale but around a 2 at Ferriby Number of bales piled up and strewn across this site. Maintenance is very poor - site may not be meeting permit regulations as they stand.	NW, W, SW	NE		
232	1838219	15/08/2020 16:26	Long Plantation		YOR - Odour - Long Plantation CAT 3: 1st report in 24 hours.	NW, W, SW	NE		

							 ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
				Odour coming from suspected Trans waste Recycling And Aggregates Ltd Gibson Lane Site - EPR/BP3792LD HU14 3HH Described as a poo/ manure smell.			
				not suspected to be land spreading. Noticed at 15:45. Odour has been on and off for the last few days, yesterday was worse. This is an ongoing issue in the area.			
				Odour is getting inside the house. Windows are closed. Weather is described as overcast and light breeze. Rated 5/6. Caller is having to stay inside due to the overwhelming power of the odour.			
				P MARRIS (EMDO) - wind direction generally from NE or ENE from IBROUG5 and 5-10mph on wunderground, Reporter upwind of site. Email sent to operator.			
				YOR - Odour - Long Plantation			
				CAT 3: 2nd report in 24 hours.			
		15/08/2020		Odour coming from Transwaste on Gibson lane. Described as strong manure smell. Normally the site creates a sweet smell. First noticed at 11:00. Odour has not been present for the last few days. Caller is located less than a mile.			
233	1838236	18:14	Long Plantation	Odour is getting inside the house. Caller has had to close the windows. Weather is described as overcast and a light breeze. Rated 4/5. Washing on the line smells terrible, limiting how the caller can use their garden.	NW, W, SW	NE	
				P MARRIS (EMDO) - wind direction generally from NE or ENE from IBROUG5 and 5-10mph on wunderground, Reporter upwind of site. Email sent to operator.			
				YOR-Odour-Long Plantation			
				CAT 3: 3rd report in 24 hours.			
234	1838378	16/08/2020 13:36	Long Plantation	Caller is reporting an odour coming from the Transwaste site on Gibson Ln, North Ferriby, Melton HU14 3HH Site is a waste site and a recycling site. Odour desired as sickly manure and sweet. Odour first noticed yesterday and has started again two hours ago today.	NW, W, SW	NE	
				Odour not getting inside the house as windows and doors are closed. Weather described as slight Northerly wind and damp. The caller rates the odour as a 4/5.			

235	1841362	24/08/2020 19:06	Long Plantation		YOR Odour Long Plantation cat 3 1st report in 24 hours Caller is reporting an odour coming from the Transwaste site on Gibson Ln, North Ferriby, Melton HU14 3HH Caller reported that they are 100 yards away from the site Caller stated that the smell is rotten rubbish , also sweet sickly Caller stated that the dolur can get in their property if any doors or windows are open Caller stated that the weather at the moment is still and dry Caller stated that they cannot enjoy sitting in their garden due to the odour.	NW, W, SW	changeable	Y	
236	1841584	25/08/2020 14:18	Long Plantation	report in 24hrs in 2km radius	YOR Odour Long Plantation cat 3 2nd report in 24hrs in 2km radius Caller is reporting an odour coming from the Transwaste site on Gibson Ln, North Ferriby, Melton HU14 3HH today at 12pm Caller stated that the odour smell likes burning manure smell, making you feel sick Caller stated that they are around 1/4 miles away from the site Caller stated that they are around 1/4 miles away from the site Caller stated that they would rate it at 5/6 on the scale Caller stated that they cannot have any window or doors open due to the odour Caller stated that the dour is having an effect on their day to day lifestyle, meaning that they cannot sit out in their garden or hang any washing out	NW, W, SW	SW (Gust wind all day, 40mph)	Y	
237	1844424	04/09/2020 07:00	Transwaste		Yorks - Odour - Cat 3 Reporting odour from Transwaste which was first noticed at 0630 this morning Described as a sweet sickly smell. like vomit The smell is not in house. Noticed whilst outside Caller is about a mile - 2 from site Weather described as mild, sunny. no strong wind Rated at 4/6 0900 wind direction from SWW at 13mph		sw		
238	1844867	05/09/2020 16:44	Long Plantation	hours & 2 km	YOR Odour Cat 3 1st report in 24 hours & 2 km Transwaste, Gibson Lane, Hull Caller is reporting the odour from Transwaste described as like a farmyard odour and rated as 5/6. It was noticed just now, and it wasn't there this morning. It is not inside the home with the windows and doors closed. The caller is 10 minutes' walk from the site and the weather is sunshine & showers, a gentle breeze. The caller says it has been worse recently	NW, W, SW	W (gust wind a 2 pm)	Y	

239	1844906	05/09/2020 20:32	Melton Hill	transfer Station - Waste drying plant -	YOR - Odour - Transwaste - Waste transfer Station - Waste drying plant - Melton CAT 3 - 2nd report in last 24 hours Transwaste Gibson Lane Melton North Ferriby Smell of an acrid burning This was an issue this morning - started at midnight Started again this evening at 20:30 Approx. 1 mile from the site Rated at 4/6 - outside Not noticeable inside yet - doors and windows closed Weather is Clear - gentle breeze which is West South Westerly This is a perpetual nuisance - often a worse issue during the night and in the morning - suspected to be from dampening down of wood burners	S	SW	Y	
240	01846877 (M)	11/09/2020 15:17	Low Field Farm	Low Field Farm - CAT 3 -1st report in	YOR - Odour Complaint Transwaste - Low Field Farm - CAT 3 -1st report in 24 hours / 2km Transwaste, Gibson Lane, Melton HU14 3HH Odour is sickly mixture of melting plastic and food waste Odour is on a daily basis - but prompted to call by local parish magazine. All around the clock, being going on for years. The odour is getting inside the house when windows are open The weather is dry and breezy The odour is rated at a 6 Compiling footage of trucks coming in and out which are strewing waste across the road. The caller is a keen birdwatcher but now the main type of bird is seagull. It's very distressing. The machinery noise is bad in Ferriby and Melton - it's around the clock.	SSE	SW		
241	1846901	11/09/2020 16:25	Melton Hill	CAT 3 - 2ND REPORT IN 24 HOURS	YOR - ODOUR CAT 3 - 2ND REPORT IN 24 HOURS Caller reporting the odour from Transwaste Caller has been away for the last few days and has just come back and it stinks. Smell of green waste. Caller is about a mile from the site. No further information as got cut off, did try to call him back but had to leave a message.	S	sw	Y	
242	1846904	11/09/2020 16:28	Melton Hill	Report in 24 Hours, 2km	YOR - Odour CAT 3 Min impact - 3rd Report in 24 Hours, 2km Taking Place Near Melton Hill	S	SW	Y	

					Caller reporting an odour. The site is called Trans waste, Gibson Lane, Melton. The odour is like a household green bin waste. Caller noticed the odour at 16.15. The site is about a mile from the property. The odour getting inside having to close windows and doors. Weather is cloudy and South westerly wind. Caller would rate the odour at a 4. Caller the effect the odour had was when unloading car was really bad.				
243	1848218	15/09/2020 16:38	Low Field Farm	Cat 3 1st report in 24 hours & 2 km	YOR - Odour - Low Field Farm Cat 3 1st report in 24 hours & 2 km Caller reports odour at Trans-Waste site, Melton HU14 Caller reports the site is about 700-800 metres from the site Caller reports this has been going on for years Caller reports this is on and off depending on wind direction Caller reports little wind, dry and sunny Caller reports smell is like a putrid garbage Caller reports this can be smelled inside and out with windows and doors closed Caller reports smell is a 6 DB- Wind SE at time toward reporter, very low wind speed but report location very close to site so substantiated on that basis.	SSE	S, E	Y	
244	1848250	15/09/2020 17:32	Long Plantation	Report #2 of last 24 hrs.	<ul> <li>YOR - Odour - Transwaste: CAT3: Report #2 of last 24 hrs.</li> <li>Caller reports an odour from Transwaste.</li> <li>Caller reports that they have had this odour a number of times in the last week.</li> <li>Caller describes the odour as "foul".</li> <li>Caller rates the odour as a 4.</li> <li>Caller describes weather conditions as 26 degrees with a very slight breeze.</li> <li>Caller lives approx 2 mile away from the site.</li> <li>Caller reports that the affect has been that the odour forces them inside.</li> <li>Caller reports that all of the doors and windows are closed.</li> <li>40 Foster St, Hull HU8 8BT</li> </ul>	NW, W, SW	Ε		
245	1851076	24/09/2020 10:30	Long Plantation	Cat 3 - 1st report in 24 hours	YOR - Odour - Long Plantation Cat 3 - 1st report in 24 hours The caller is reporting an odour from trans waste The odour today is a very strong smell of rotting vegetation	NW, W, SW	sw	Y	

					This makes the caller retch This was first noticed at 09:31 The odour depends on the wind The weather is damp with slight rain and a slight wind The caller lives a mile from the site This can be smelt inside the property and the caller has had to close windows The odour is a 5/6				
246	1851884	28/09/2020 09:38	Melton Hill	Cat 3 - historic report	YOR - Odour - Melton Hill Cat 3 - historic report The caller is reporting odour from trans waste The smell happened on the 24th of September in the morning This caused the callers stomach to turn The callers windows were open The caller lives a 30 minute walk from the site The weather was nice and windy The wind is what caused the smell to be so strong as it was blowing from the site towards the caller The odour was a 6/6	S	NW, W		
247	1854291	05/10/2020 18:02	Transwaste	report in 24hrs/2km	YOR - Odour - Melton Hill - CAT3 - 1st report in 24hrs/2km Caller reports odour from Transwaste in Gibson Lane. Describes the smell as rotting household waste. This was noticed at around 16:30 and it is still there. The site is about a mile away from the caller's home. The smell does not get inside the house. Weather is dry with a SW gentle breeze. Caller rates the odour as a 4. The caller would not go out because of the smell		w		
248	01860304 (M)	01/11/2020 12:03	Long Plantation	Cat 3 - Minimal Impact - Retrospective	YOR - Odour - North Ferriby Cat 3 - Minimal Impact - Retrospective report. Caller is reporting the odour from Transwaste, Melton Ind Est. This started at 15:00 yesterday. Caller was at Corby Park Road, an exit from Ferriby, this is about 0.9 of a mile from the site. It smelled of rotting food, a typical tip smell. It didn't smell at home, the wind direction was wrong. The weather was clear, decent breeze, don't know which direction. Cloudy, no rain. They rated it 3/6.	NW, W, SW	SW (gust)	Y	
249	1860305	01/11/2020 12:06	Long Plantation	Cat 3 - Minimal Impact - Retrospective	YOR - Odour - North Ferriby Cat 3 - Minimal Impact - Retrospective report. Caller is reporting the odour from Transwaste, Melton Ind Est. Was at 17:00 hours on 20/10/2020. This was smelled on the Wolds Way near Welton Mill. It smelled of rotting food, a typical tip smell. Gentle southerly breeze, 11mph, no rain. Sunny. Caller was 1.1 miles from the site. They rated it 6/6.	NW, W, SW	SW (gust)	Y	
250	1861309	05/11/2020 16:45	Long Plantation	CAT 3 1st report in 24 hrs	YOR - Odour from Trans Waste CAT 3 1st report in 24 hrs	NW, W, SW	sw	Y	

					The caller rang to report an odour from Trans waste The caller states they are recycling plant The caller describes the odour at rotting food, tip, horrible, disgusting The caller states they noticed the odour at 15:30 The caller states their property is half a mile away from the site The caller states the odour is getting into their property - doors open The caller states the weather is clear, no wind The caller states the odour is a 5/5.5 The caller states the odour is affecting them, by them not wanting to live in the area or go outside Waste team update, site notified and asked to investigate the issue				
251	1862754	12/11/2020 08:51	Melton Hill		YOR - Odour CAT 3 - 1st report Odour coming from Transwaste. The site is a mile from the caller. Noticed today as they got out of the car at 08.45. Described as rotting green bin waste. Rated as a 4. The odour is not getting inside their property just yet. The weather is clear, gentle breeze and dry.	S	S	Y	
252	01865093 (M)	21/11/2020 10:20	Melton Hill	Cat 3 1st report in 24 hours, 2km	NE: Odour from the Trans waste sites - Cat 3 1st report in 24 hours, 2km radius - It's a rotten food smell. Rates it 5/6. Smelt as soon as they opened the front door. Wind is South Westerly, gentle breeze. They are about 1 km away from site. The council is putting more industrial units in the area.	S	sw	Y	
253	1865108	21/11/2020 11:46	Melton Hill	hours, 2km radius - Melton Hill -	YOR - Odour - Cat 3 2nd report in 24 hours, 2km radius - Melton Hill - Odour from Transwaste, between Melton and Ferriby. Described as a bit chemically and worse than a stinky bin, like one left for months in the summer. First noticed around 11:45 Distance to the site is about 1.2 miles. Odour is outside the property with all windows and doors closed. Weather is windy, dry and partially cloudy. Wind is coming from the south west, they believe. Odour rated 3 out of 6.	S	sw	Y	
254	1865117	21/11/2020 12:03	Melton Hill	hours, 2km radius - Melton Hill -	YOR - Odour - Cat 3 3rd report in 24 hours, 2km radius - Melton Hill - Odour from Transwaste in Melton. Described as household waste, rotting food. Noticed around 11:00 on the 21/11/2020. Distance is about 1 mile. Odour has entered the property through open windows. All now closed.	S	sw	Y	

## Gibson Lane, Hull, HU14 3HH

					Weather is south west strong wind and partially cloudy. Odour rated 4 out of 6.				
255	1880272	17/01/2021 16:43	Long Plantation	CAT 3 minimal reports 2 report 2 km	YOR/ODOUR CAT 3 minimal reports 2 report 2 km 24hrs Caller reporting an odour from Transwaste Gibson Lane South , Melton Fields,HU14 3HH Energy from waste site. Caller says they have been in operation for a year now they have not got a licence. Odour smells like smoke This has been going on all afternoon Noticed at 14.30hrs Caller says now it is particularly bad at 16.46. There is lots of smoke from the site and there is a slight blue haze in the smoke Odour cannot be smelt inside the property with the doors and windows closed Weather is hardly any wind and it's been dry but there is a damp atmosphere. Rates 4 Strong (odour that may make your hair or clothes smell) Caller lives approximately 1 mile from the site. Call taken @ 16.43 on 17.01.2021	NW, W, SW	W	¥	

## Table B2 Odour Complaints with "Smoke Smell"

	Ref No	Reported	Location	Notification Details	Description of Smell	Location: e.g., the site (HU14 3HH) is located SSE of the odour reporter.	Wind directions at the time of reported	Likely Sourc e from the site (HU14 3HH)? Y/N	Remarks
1	59	1726308	05/08/2019 07:43	Low Field Farm	0203 0258 149 YOR - Odour - Transwaste - North Ferriby, Hull Described as an odour of smoke First noticed at 06:20 Approx. 500m from the site Rated at 5/6 Noticeable inside the premises - doors and windows closed Weather is heavy cloud cover, slight breeze CO: Transwaste site on fire.	SSE	S	Y	Boilers were not on

2	61	1726523	05/08/2019 13:54	Long Plantation	Odour - YORKS - Caller is reporting an odour Believed to be from the Trans waste Plant The odour is an acrid Smokey smell that gets the back of your throat, it was first noticed around 9am today but this is an ongoing problem The site is roughly 3 miles from the callers property and the odour is getting inside of the callers home, the windows are open due to hot weather The weather is described as warm and sunny at the moment and there is no breeze, this morning there was rain when the odour was first noticed. The odour is rated at a 5 or 6	NW, W, SW	sw	Y	Boilers were not on
3	65	1726635	05/08/2019 16:57	Melton	YOR - Odour - Melton Customer believes the odour is coming from Gibson Lane, Melton, North Ferriby, North Humberside, HU14. Odour described as acidic, burning waste. Customer saw a large fire at the site 8am 05-08-2019 but couldn't smell anything as the wind was facing the other direction. Customer is roughly less than a mile from the site. Odour is currently just outside as the caller has the windows closed. Weather is breezy and sunny. Wind blowing from the west. Odour rated 5/6. Wind direction according to BBC website is WSW putting reporter downwind of site	S	sw	Y	Boilers were not on
4	68	1726649	05/08/2019 17:18	Long Plantation	NE - Odour, Hull Caller reports being affected by a bad smell emitting from Transwaste in Melton, Hull, close to caller's location. Caller describes the odour as "a bad smell but not at the worst it's ever been." They describe the odour as "a nasty, sicky, tip smell" - which is not thought to be associated with the recent fire onsite. Caller says that every now and then they can smell the effects of burning when the wind changes direction to coming from the site. But the sick type odour has been constant all day today and is not wind dependent. The underlying sick smell is rated at around 5/6 in intensity. Caller has been unable to keep the smell out of the house, as the weather is hot and humid, so all their windows have had to be open, as it's too muggy to cope with them closed.	NW, W, SW	sw	Y	Boilers were not on
5	79	1727339	07/08/2019 13:59	Long Plantation	YOR - Odour - Long Plantation Call received to report odour coming from Trans Waste	NW, W, SW	w	Y	Boilers were not on

					The odour is described as being scorched household waste due to a fire that was at the site at the weekend The reporter picked up on the smell whilst out walking, the odour doesn't affect the reporter at their home Weather conditions are described as being bright, cloudy, warm Smell intensity is scored 4/6 Feedback is required, 10 day charter given				
6	162	1741543	26/09/2019 19:19	Melton	YOR - Odour Possibly Transwaste Site, Hull smells like a burning smell. First noticed at 6.30pm. The site is around 1/4 of a mile away Rated 5 out of 6. The smell is inside the house, windows are closed. Weather is wet, still.	S	S	Y	Boilers were not on
7	164	1741580	27/09/2019 07:13	Melton	<ul> <li>020302 58149: YORKS East: Odour / Burning of Waste:</li> <li>Caller reports the smell again from Transwaste at Melton. This was noticed at 7am.</li> <li>The odour is described as "the smell of burning" and believes that there must have been a fire again.</li> <li>Caller feels that fires are occurring more often at the site recently.</li> <li>The smoke is blowing across from the direction of the site - looks like fog in the air.</li> <li>The smell is obvious at Monks Way which is closer to the site than the callers house.</li> <li>Weather conditions are fine and dry with a slight breeze.</li> <li>Location: Monks Way Melton, North Ferriby.</li> </ul>	S	S	Y	Boilers were not on
8	165	1741630	27/09/2019 09:47	Low Field Farm	L/M @ 10:13 - +442030258149 YOR - Odour Location: North Ferriby A caller is reporting an odour from Transwaste. There is an intermittent methane/chicken farm smells which come from the site. Today there is a smell of smoke coming from the site. Unsure if there is a fire at the site. The odour was noticed at roughly 08:00. The site is roughly 1/4 of a mile from the reporter. The odour was rated 6/6. The odour is entering the building with windows shut, it is only faint inside the building though.	SSE	S	Y	Boilers were not on
9	166	1741635	27/09/2019 10:04	Low Field Farm	YOR. Odour. Caller reports what smells like a fire of some description emanating acrid smoke. It seems to be coming from the rear	SSE	S	Y	Boilers were not on

					of a waste transfer site called Trans Waste about half a mile away. Caller says it is 3/6 on smell scale. The smell was getting inside the house this morning. Caller had windows open during the night but has had to close them. This is the second time in the last couple of months caller has noticed this. Caller says it is not a regular occurrence before that. Caller does not know what is being burned and cannot see the fire itself. Caller has also reported this to the Local Council.				
10	167	1741961	28/09/2019 17:03	Long Plantation	YOR - Odour Transwaste, Hull Smells like acrid burning plastic/rubber. First noticed at 11am, been constant since. The site is around half a mile away. Rated 5 out 6. The smell is inside the house, windows are open. Weather is quite humid, light breeze.	NW, W, SW	sw	Y	Boilers were not on
11	192	1768435	10/01/2020 14:56	Long Plantation	020302 58149: YOR - Odour Caller reporting odour coming from Transwaste in North Ferriby, this is 2-3 miles from callers address. First noticed midday and has gotten worse Described the odour as burning stuff smell and gone waste smell. Odour outside with window and doors closed. Smell intensity: 3.5/6 Weather Conditions: 7degrees and hardly any breeze	NW, W, SW	sw	Y	Boilers were not on
12	207	1808617	21/05/2020 10:29	Melton Hill	X4 08000321631 @ 10.53 Yor Smell 2 of 3 Yesterday there was a smell present from 14:00-15:30 from the Transwaste Site in Melton here was a south west wind and the caller could smell something like incineration in the rear garden. The weather yesterday was hot dry and a light wind. When the wind changed direction the smell went. The caller scored the smell as 4/6 for intensity	S	S	Y	Boilers were not on
13	209	1809183	2+C208:J2082/0 5/2020 13:35:00	Melton Hill	YOR - Odour from Transwaste The caller rang to report an odour from Transwaste The caller describes the odour as a burning smell The caller states they first noticed the odour @ 13:30 The caller states their property is a mile away from the site The caller states they can't smell the odour in their property - windows and doors closed The caller states the weather extremely breeze, blue skies, sunshine, mild The caller states the odour is a 4.5 RG (CO) Wind direction according to Windy.com is SW putting complainant downwind of Transwaste. E-mail sent to Transwaste	S	SW (gust wind 40 mph)	Y	Boilers were not on

14	210	1809434	23/05/2020 09:36	Melton Hill	YOR - Odour - Melton Hill Caller reporting a burning odour coming from Transwaste on Gibson Lane in Melton. Reporting a potential burning smell at the same time every morning. Caller has noticed a pattern. noticed at 08:30 this morning. This has been this time in the morning for the last 7 days. Caller reports the odour disappears soon after, the odour is no longer present at 09:40. Caller reports the odour was getting inside the house. Some windows were slightly open this morning. Weather is windy, south westerly wind. Rated a 4 outside. EMDO (KP): Wind direction according to time and date.com is SW putting complainant downwind of Transwaste. E-mail sent to Transwaste	S	S (gust wind 40 mph)	Y	Boilers were not on
15	211	1809868	25/05/2020 08:55	Melton Hill	<ul> <li>left msg 09.05 - 08000281886 - YOR - Odour - Melton Hill</li> <li>Site is named Trans Waste on Gibson lane in Melton. Described as wood smoke smell.</li> <li>EA is aware, the site have wood burners that are causing the odour. Was first noticed today at 09:00.</li> <li>This has been prominent for the last few days, 1 instance was noted at 05:00 on the 23rd. Located 1 mile from the site.</li> <li>Weather is described as warm and clear, south west wind blowing from the site. Odour is not in the house. Windows and doors. Rated as a 2, was rated as a 6 on the 23rd.</li> <li>EMDO (KP): Wind coming from SSW direction; 7mph and 11-20oC according to timeanddate.com. Prior to that the wind has been coming from the SW for the past few days. Emailed the site.</li> </ul>	S	S	Y	Boilers were not on
16	212	1814875	06/06/2020 07:45	Melton Hill	ml 08:02 & 08:22 - +448000281886 - YOR - Odour - Melton Hill *Cat 3 - 1st report within 24hrs & 2km* Call received to report odour coming from Trans Waste Gibson Lane Site - EPR/BP3792LD The odour is described as being wood smoke The reporters property is approx 1 mile away from the site in question The odour has entered the reporters property, windows were open & have had to be closed Weather conditions are described as being blustery & damp, wind is from the West Smell intensity is scored as 2/6 RG (EMDO) Wind direction is Westerly, moderate breeze according to Windy.com	S	SW (gust wind)	Y	Boilers were not on

17	223	1830727	25/07/2020 23:38	Melton Hill	YOR odour Thought to be from Transwaste CAT 3 1 duplicate Can't be sure it is from that site, but says the smell is widespread around the area, definitely not a local bonfire. Says it is an acrid burning waste or bonfire smell. Rated as a 6, says it comes in the house windows open. The caller thinks they are about a quarter of a mile from the site. The caller is due east of the site. Usually a prevailing wind from the west. The weather is pleasant with a bit of breeze and warm.	S	S	Y	Boilers were not on
18	226	1831481	28/07/2020 15:42	Long Plantation	<ul> <li>YOR- Odour - Trans waste site on Gibson way cat 3 minor impact</li> <li>Caller is reporting a bad odour from this site last night at around 23:00pm</li> <li>Caller rates the odour a 4/6</li> <li>The caller describes the odour as a burning plastic</li> <li>The odour was experienced outside the house at the time when reporter was walking dogs</li> <li>The site is around 0.7 away from reporters house</li> <li>Reporter describes the weather as a slight breeze from the west the speed is unknown</li> <li>Caller states that the sky was pretty clear with some clouds</li> <li>The smell was constant when caller got inside their house</li> </ul>	NW, W, SW	W (gust wind all day)	Y	Boilers were not on
19	229	1832699	01/08/2020 07:41	Melton Hill	<ul> <li>YOR. Odour. (Cat 3 min impact - 1st)</li> <li>Caller reports a bad acrid wood smoke smell coming from Transwaste about a mile away.</li> <li>Caller says he had windows open and it has got inside the house. Caller says he has a dry throat and his eyes are sore.</li> <li>6/6 on smell scale. Warm and still weather.</li> <li>EMDO (KP): Checked weather conditions; wind from SW, 13mph, 63oF, fair. Likely to be substantiated.</li> </ul>	S	S	Y	Boilers were not on
20	230	1833598	04/08/2020 10:54	Elloughton Hill	YOR/ODOUR CAT 3 1st report in 24 hrs 2 km Caller reporting an odour from Transwaste, Gibson Lane, Melton Odour smells like burning plastic Noticed at 09.30hrs It was present last week just for one day and it normally when the wind is coming from the south. Odour can be smelt inside the property with the doors and windows closed Weather is quite dull and cloudy and breeze from the south with a 12 mile an hour breeze.	SE	S, SW	Y	Boilers were not on

					Rates 4 Strong (odour that may make your hair or clothes smell) Caller lives approximately 1mile and half as the crow flies from the site. Call taken @ 10.54 on 04.08.2020				
21	236	1841584	25/08/2020 14:18	Long Plantation	YOR Odour Long Plantation cat 3 2nd report in 24hrs in 2km radius Caller is reporting an odour coming from the Transwaste site on Gibson Ln, North Ferriby, Melton HU14 3HH today at 12pm Caller stated that the odour smell likes burning manure smell, making you feel sick Caller stated that they are around 1/4 miles away from the site Caller stated that they weather is warm, drizzling Caller stated that they would rate it at 5/6 on the scale Caller stated that they cannot have any window or doors open due to the odour Caller stated that the dour is having an effect on their day to day lifestyle, meaning that they cannot sit out in their garden or hang any washing out	NW, W, SW	SW (Gust wind all day, 40mph)	Y	Boilers were not on
22	239	1844906	05/09/2020 20:32	Melton Hill	YOR - Odour - Transwaste - Waste transfer Station - Waste drying plant - Melton CAT 3 - 2nd report in last 24 hours Transwaste Gibson Lane Melton North Ferriby Smell of an acrid burning This was an issue this morning - started at midnight Started again this evening at 20:30 Approx. 1 mile from the site Rated at 4/6 - outside Not noticeable inside yet - doors and windows closed Weather is Clear - gentle breeze which is West South Westerly This is a perpetual nuisance - often a worse issue during the night and in the morning - suspected to be from dampening down of wood burners	S	sw	Y	Boilers were not on
23	240	01846877 (M)	11/09/2020 15:17	Low Field Farm	YOR - Odour Complaint Transwaste - Low Field Farm - CAT 3 -1st report in 24 hours / 2km Transwaste, Gibson Lane, Melton HU14 3HH Odour is sickly mixture of melting plastic and food waste Odour is on a daily basis - but prompted to call by local parish magazine. All around the clock, being going on for years. The odour is getting inside the house when windows are open The weather is dry and breezy The odour is rated at a 6 Compiling footage of trucks coming in and out which are	SSE	SW		Boilers were not on

					strewing waste across the road. The caller is a keen birdwatcher but now the main type of bird is seagull. It's very distressing. The machinery noise is bad in Ferriby and Melton - it's around the clock.				
24	255	1880272	17/01/2021 16:43	Long Plantation	YOR/ODOUR CAT 3 minimal reports 2 report 2 km 24hrs Caller reporting an odour from Transwaste Gibson Lane South , Melton Fields,HU14 3HH Energy from waste site. Caller says they have been in operation for a year now they have not got a licence. Odour smells like smoke This has been going on all afternoon Noticed at 14.30hrs Caller says now it is particularly bad at 16.46. There is lots of smoke from the site and there is a slight blue haze in the smoke Odour cannot be smelt inside the property with the doors and windows closed Weather is hardly any wind and it's been dry but there is a damp atmosphere. Rates 4 Strong (odour that may make your hair or clothes smell) Caller lives approximately 1 mile from the site. Call taken @ 16.43 on 17.01.2021	NW, W, SW	w	Y	Boilers were not on

# APPENDIX D REPORT TERMS & CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of Eco-Power environmental Limited ("the Client") for the proposed uses stated in the report by Tetra Tech Limited ("Tetra Tech"). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

No liability is accepted, or warranty given for; unconfirmed data, third party documents and information supplied to Tetra Tech or for the performance, reliability, standing etc. of any products, services, organisations or companies referred to in this report. Tetra Tech does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary, and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.