

GENERATING ENERGY FROM RESIDUAL WASTE SOURCED FROM BUSINESSES AND HOUSEHOLDS



Northacre
RENEWABLE ENERGY



Virtual Community Engagement 7 July 2020

Agenda

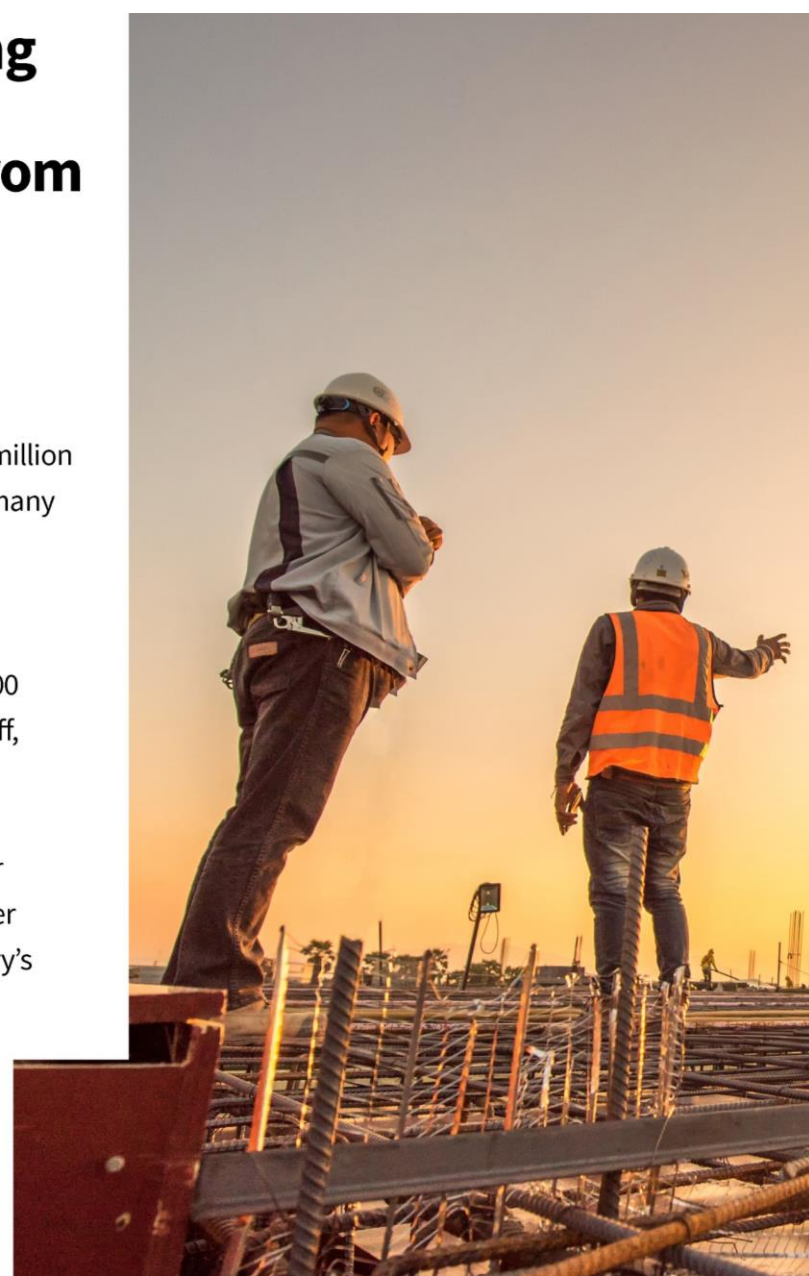
- Introduction
- Presenting updated proposals
- Feedback on questions raised before the event
- Responding to questions raised during the event
- Wrap up and post event information

Northacre Renewable Energy is proposing to develop an energy from waste facility which will turn residual waste sourced from businesses and homes into low carbon energy

At a time of significant economic uncertainty, the Northacre facility represents a £200 million investment in Wiltshire's economy and a major new source of employment including many highly skilled permanent roles.

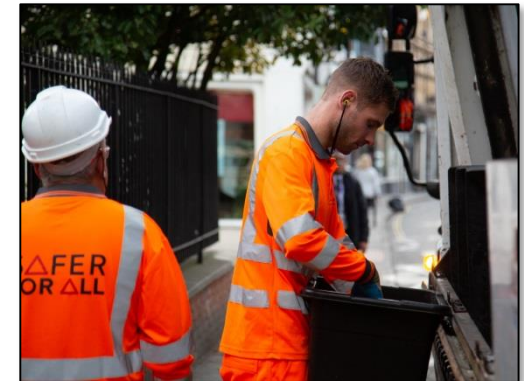
The project will turn thousands of tonnes of domestic and business waste that would otherwise be buried in landfill sites into low carbon electricity – enough to power 48,000 homes. The Northacre facility will also include electric vehicle charging stations for staff, suppliers and visitors.

The kind of technology that the plant will use has been endorsed by the Committee for Climate Change, which in its Technical Report of May 2019 specifically called for greater private sector investment in energy from waste capacity in the UK as part of the country's path to a carbon neutral economy.



The Hills Group

- Established in 1900
- Privately owned family company
- Wiltshire based, 600+ employees
- Business activities include:
 - recycling and waste management
 - quarrying of aggregates and production of ready-mixed concrete
 - building new homes



Bioenergy Infrastructure Group

- Established in 2015 and based in Reading with 100+ employees
- Leading industrial platform for biomass and waste to energy facilities in the UK
- Diverting over 1m tonnes of waste each year from landfill
- Generating renewable & low carbon energy to meet demand from industry and households across the UK in the transition to a low carbon economy



Most installations need both:

Planning permission

issued by the Local Planning Authority
in order to be built in this particular place



An environmental permit

issued by the Environment Agency
in order to operate



The permitting process

We can consider...

- Environmental impacts
- Emissions to air, water, land
- Noise, dust, odour & pests
- Waste handling & storage
- Impacts on groundwater
- Adopting Best Available Techniques (BAT)
- Management & operating procedures
- Compliance monitoring

We cannot consider...

- Transport of waste to/from site
- Highway issues in the local area eg road safety, vehicle movements
- Appropriateness/suitability of location selected for development
- Site operating hours
- Visual impacts
- Construction materials used
- Effect on local food supplies

2



We can only refuse a permit if...

1

1 or more legal requirements of environmental legislation are not met

2

The permitted activity would have a significant impact on human health

3

The permitted activity would have a significant impact on the environment or wildlife

3



We commit to consulting you...

- We have already committed to treating this development as a **Site of High Public Interest**.
- NRE's intention to change from gasification to incineration **does not change this**.
- Once we receive a permit application, and we are happy we have all the information we need, we will invite you to comment on the application **before** we make any decisions.
- We will let you know how to do this.

Please email EA_Wessex@environment-agency.gov.uk if you would like to be added to the mailing list.

4



Key dates in Northacre pre application consultation

- External launch **19 June**
- Virtual Engagement **7 July**
- Close consultation **17 July**
- Submit application **End July**
- Statutory consultation period follows



About Northacre Renewable Energy Limited.

Northacre Renewable Energy Limited (NREL) is special purpose joint venture established to deliver the Northacre energy from waste facility in Westbury. NREL is jointly owned by [Bioenergy Infrastructure Group](#), a UK independent power producer specialising in energy-from-waste and biomass facilities, and The [Hills Group](#), a Wiltshire-based company with business activities including waste management, quarrying of aggregates and building new homes.

Our proposals

We are bringing forward the Northacre facility located in the Northacre Industrial Estate in Westbury alongside industrial developments including Hills' existing Northacre Resource Recovery Centre (waste treatment facility).



Phelomontage - 2020 Proposed Development

The Northacre facility will provide a sustainable, long term solution for residual business and household waste, currently destined for disposal in landfill and export to Europe, by instead using it to generate low carbon energy. Landfilling of waste and long haulage routes makes a significant contribution to climate change effects. The need for the facility and the suitability of the location have already been clearly established by the existing planning permissions.

The benefits

The facility represents a £200 million pound investment in Wiltshire, creating secure, low carbon energy and

Our
Website -
Homepage

Further information

If you have any questions about Northacre Renewable Energy you can get in touch with us through our online 'Feedback Form' below.

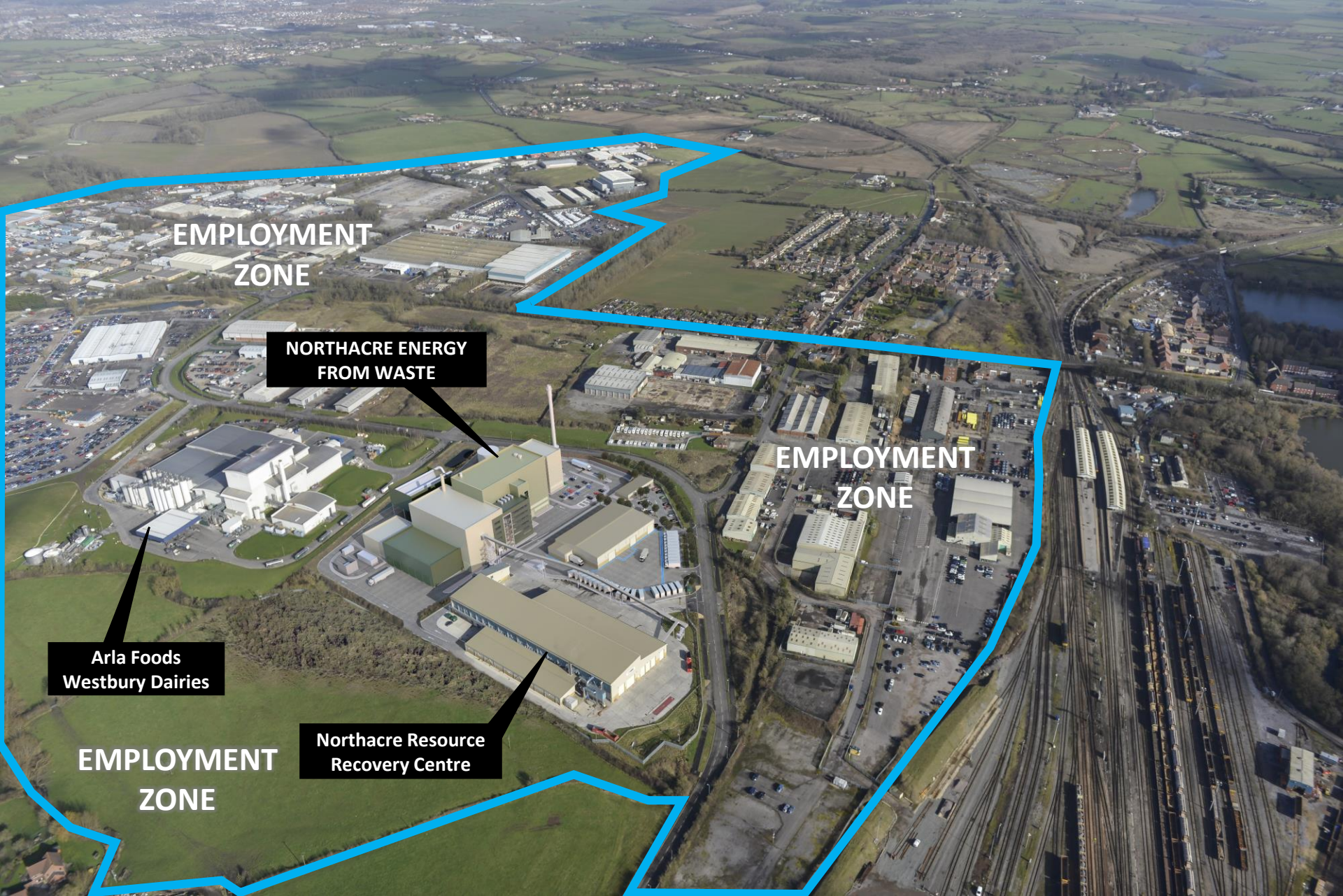
Messages from this contact form are monitored 08.30 - 17.00 Monday to Friday excluding bank holidays.

Northacre Renewable Energy
Davidson House
Reading
RG1 3EU

Website: www.northacre-energy.co.uk

Name*	<input type="text"/>
Postcode*	<input type="text"/>
Email*	<input type="text"/>
Comments*	<input type="text"/>

Our
Website -
Contact



**EMPLOYMENT
ZONE**

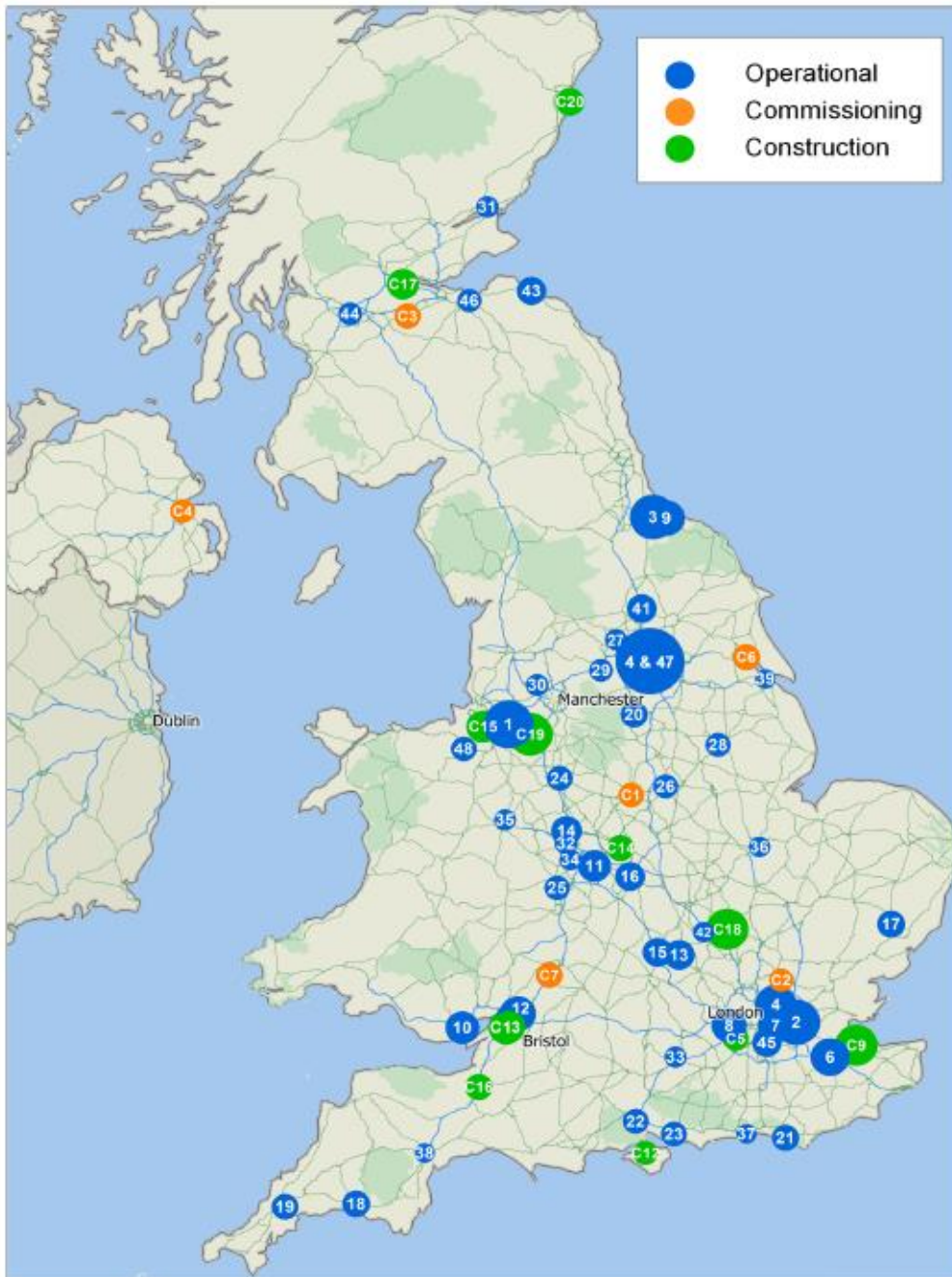
**NORTHACRE ENERGY
FROM WASTE**

**Arla Foods
Westbury Dairies**

**EMPLOYMENT
ZONE**

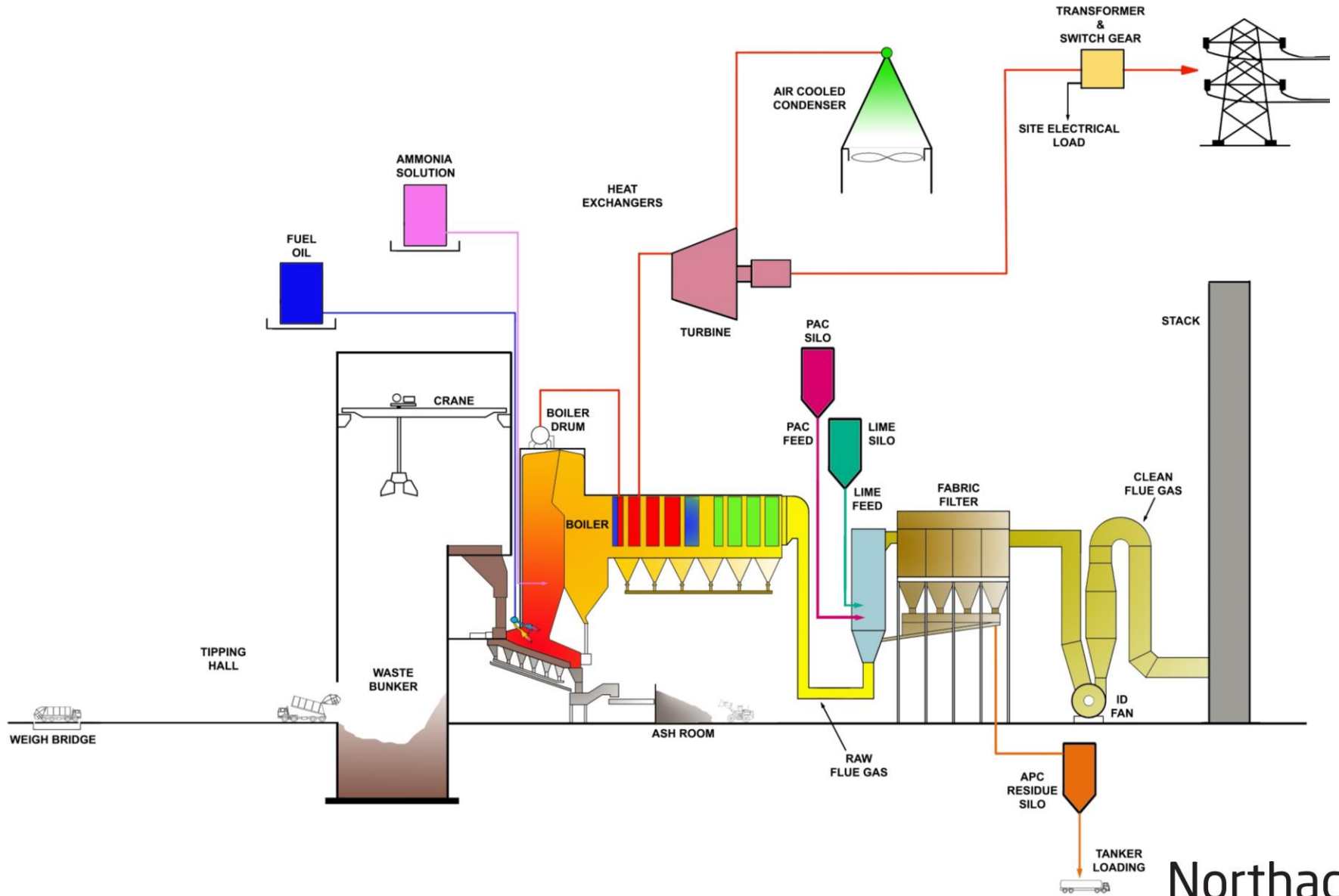
**Northacre Resource
Recovery Centre**

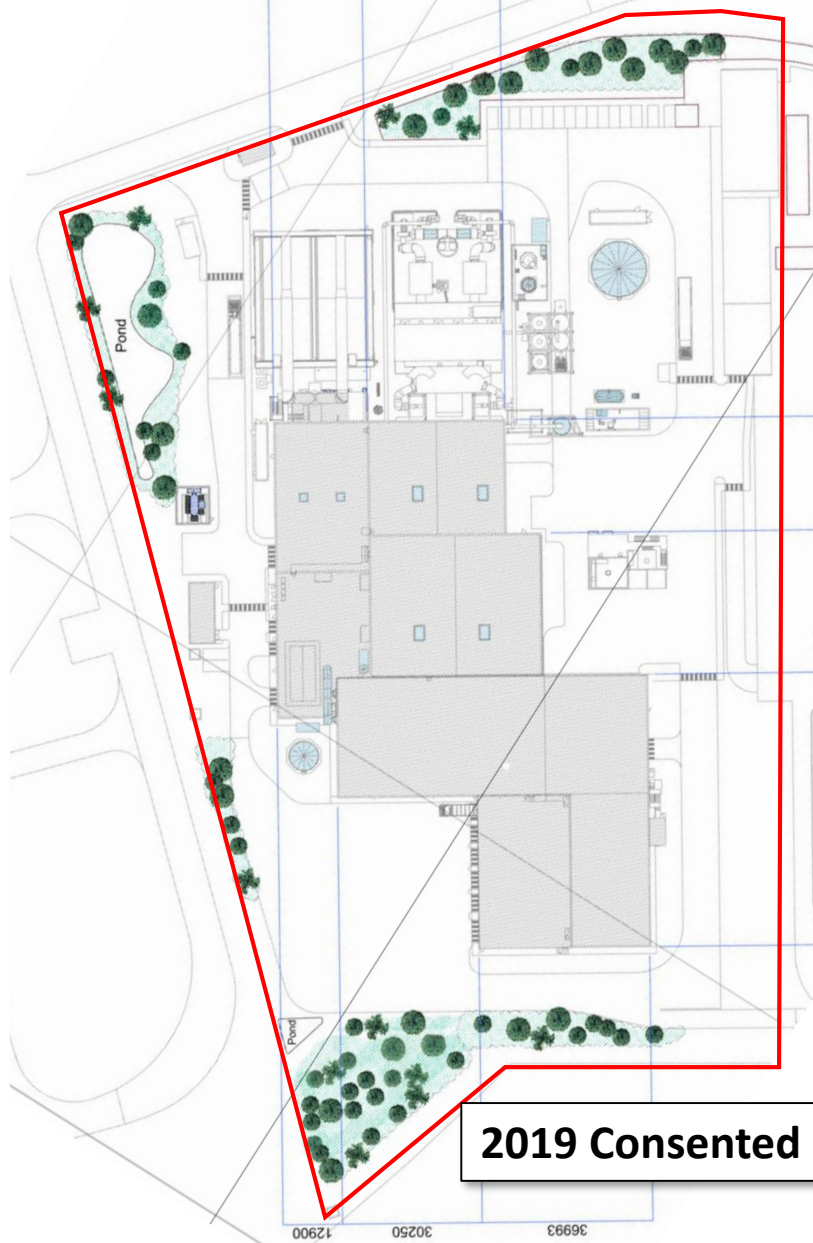
**EMPLOYMENT
ZONE**



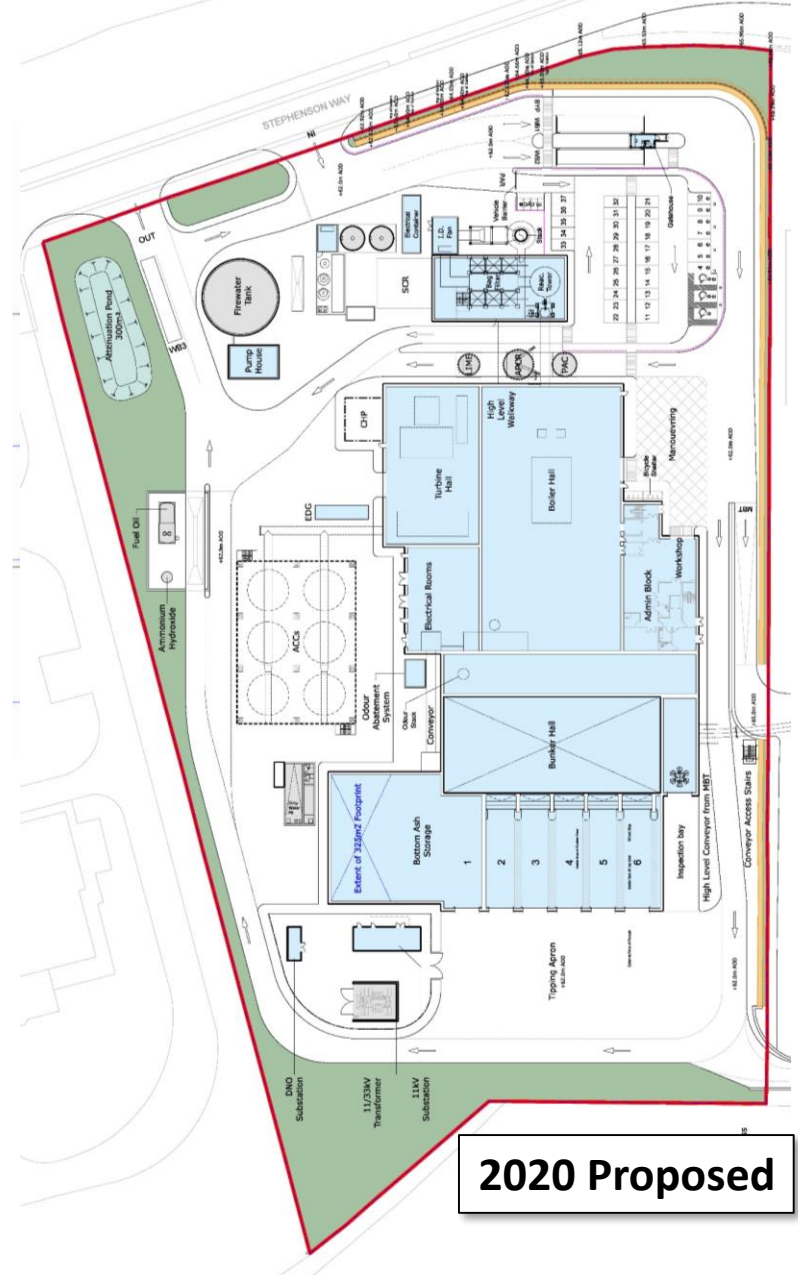
Where else
do energy
from waste
plants
operate?

How does an Energy from Waste facility work?

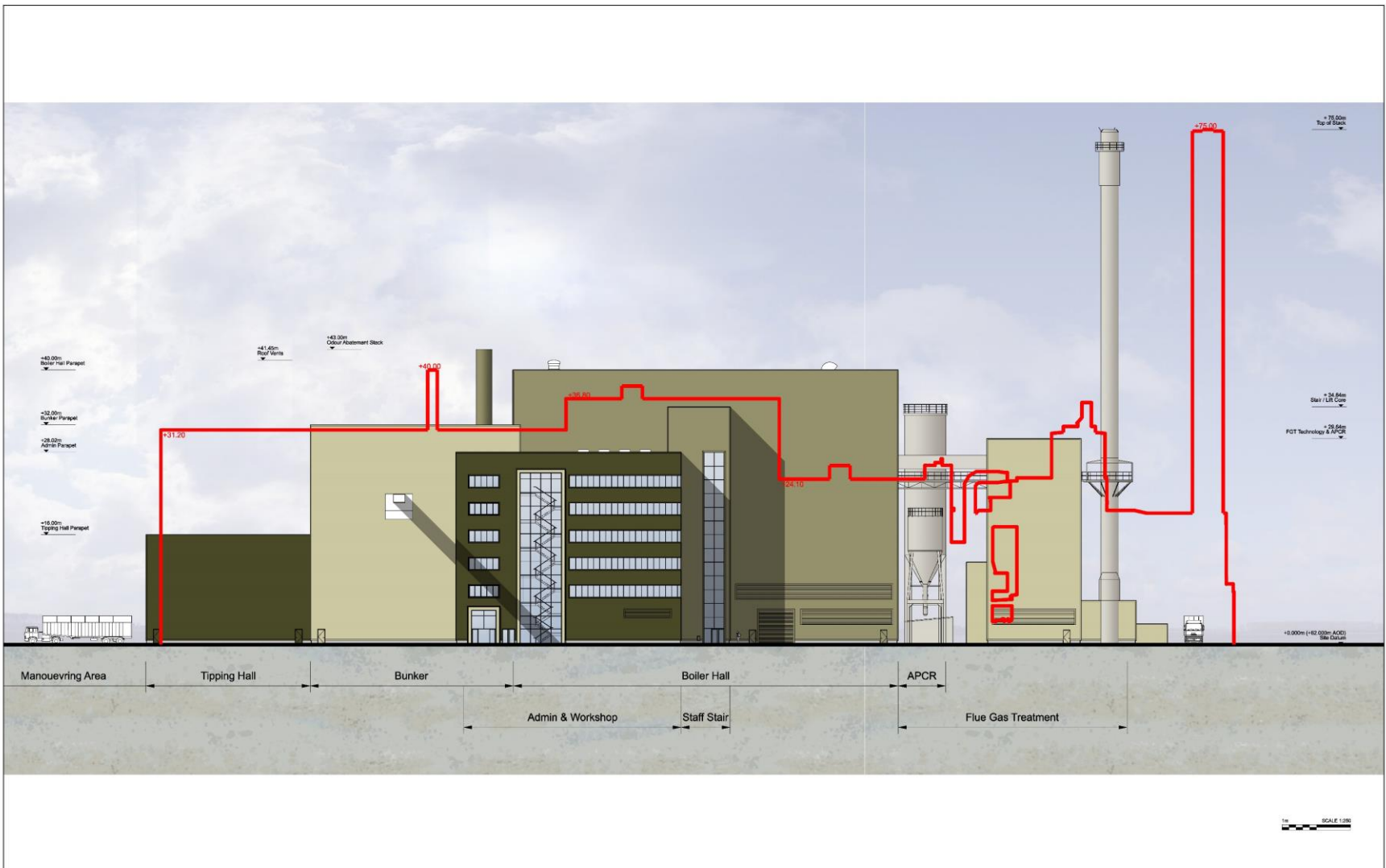




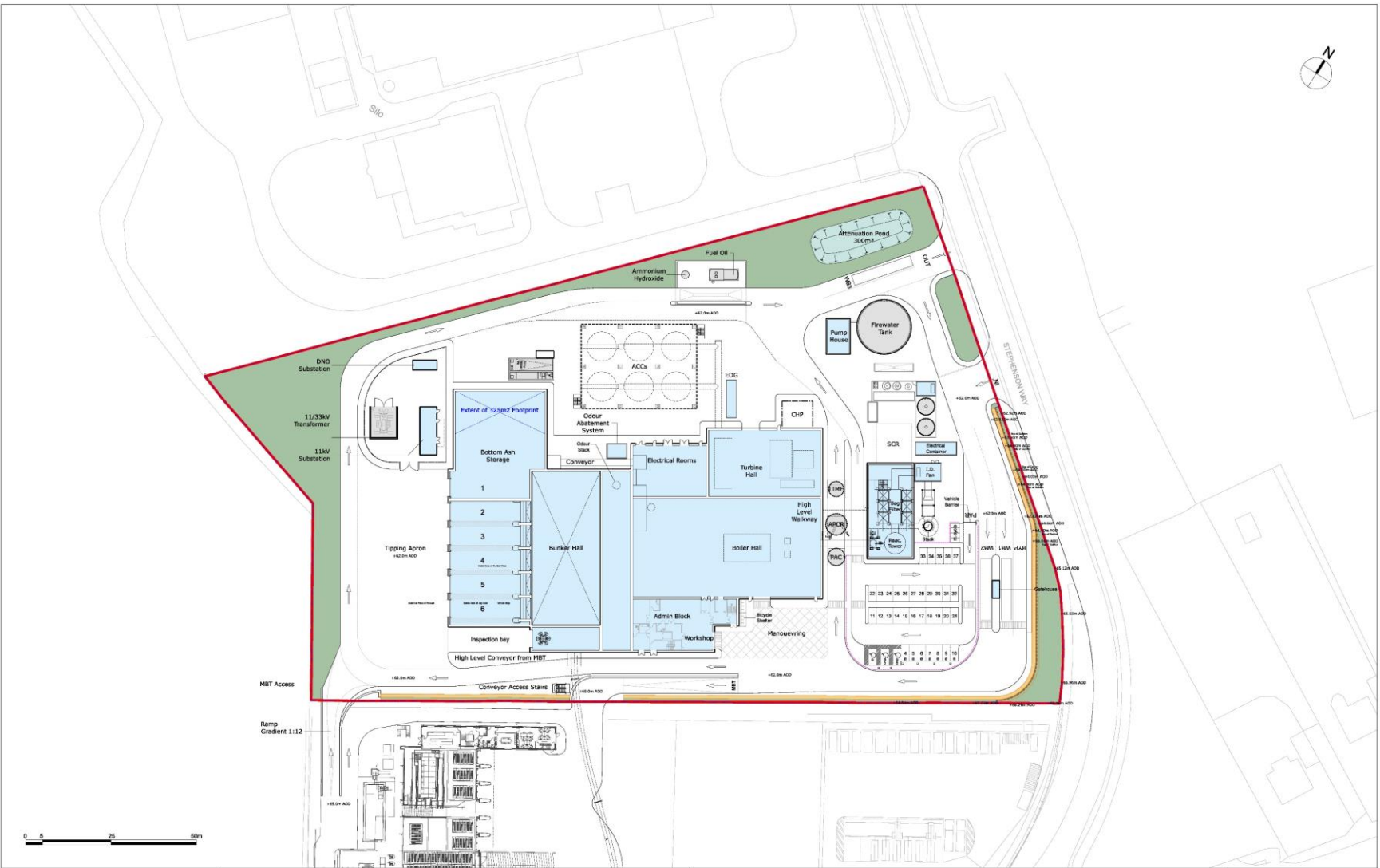
2019 Consented



2020 Proposed



<p>NOTE</p> <ol style="list-style-type: none"> THIS DRAWING IS COPYRIGHT GSDALTD. THE CONTRACTOR MUST NOT SCALE FROM THE DRAWING ALL DIMENSIONS TO BE TAKEN FROM DIMENSION STRINGS. WHERE ANY DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS THESE MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECTS FOR RESOLUTION. WHERE DISCREPANCIES EXIST BETWEEN REFERENCE OR ASSEMBLY DRAWINGS & DETAIL DRAWINGS, THE LATTER TAKE PREFERENCE. 	<p>Key</p> <p>— Outline of Profile of 2018B Design</p>	<p>PROJECT Northacre ERF</p>		<p>GSDA GARRY STEWART DESIGN ASSOCIATES Highlands House, Office 300A, 165 The Broadway, Worthington, London, SW19 1NE T: 020 8544 8085</p>
		<p>DRAWING Proposed Main Facility South East Elevation</p>		
		<p>FOR INFORMATION</p>		
		<p>1:250@A1 SCALE</p> <p>1409 SK312 DWG. NO.</p>	<p>20/07/02 DATE</p> <p>- REVISION</p>	



NOTE

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3. WHERE ANY DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS THESE MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECTS FOR RESOLUTION.
4. WHERE DISCREPANCIES EXIST BETWEEN REFERENCE OR ASSEMBLY DRAWINGS & DETAIL DRAWINGS, THE LATTER TAKE PRECEDENCE.

- Red Line Boundary
- Weld Mesh Security Fence Height: 2.4m
- Landscaping
- Pedestrian Guardrail
- Gabion Wall
- Gabion Wall extends below ground
- Acoustic Screen Height: 3.5m

PROJECT		Northacre ERF								
DRAWING		Site Layout								
FOR INFORMATION										
1:500@A1	20/06/25	-	20/03/23	Issued for information	C	20/04/22	Issued for information	F	20/06/19	Issued for information
SCALE	DATE	A	20/03/26	Issued for information	C	20/05/11	Issued for information	G	20/06/25	Issued for information
1409_SK102	G	B	20/04/02	Issued for information	E	20/05/15	Issued for information			
DWG. NO.	REVISION									

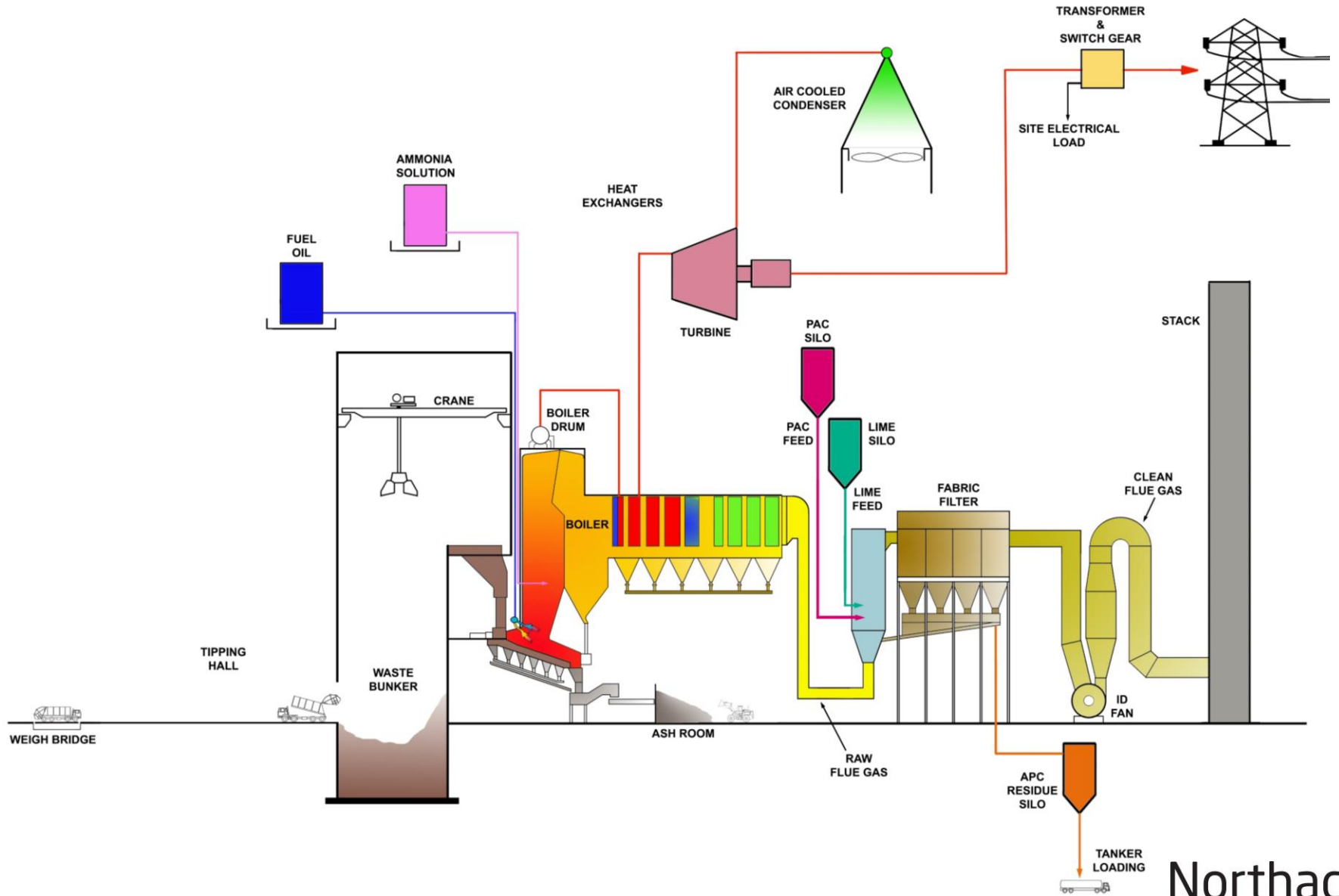
GSDA
GARRY STEWART DESIGN ASSOCIATES

Highlands House, Office 300A, 165 The Broadway, Wotton, London, SN19 1NE
T: 020 8544 8085

Air Quality – What is considered?

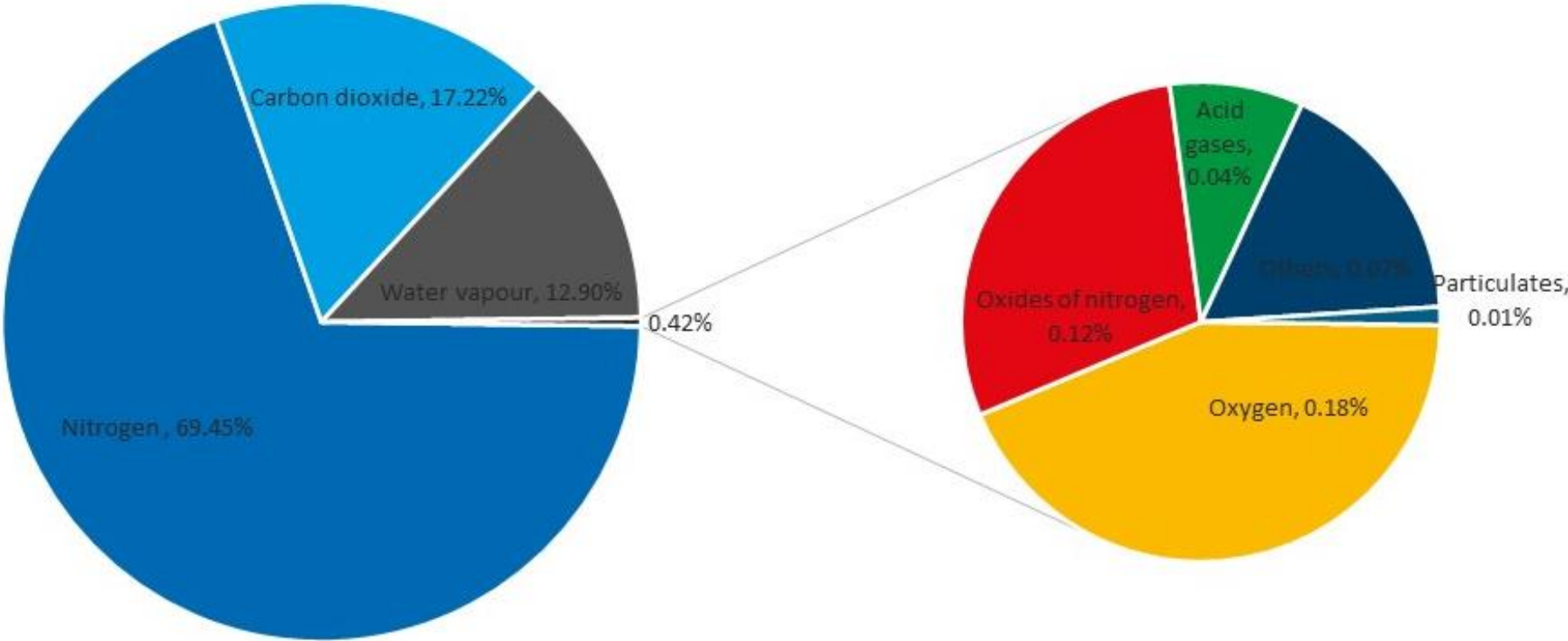
- Air quality EIA content
- Baseline analysis
- Sensitivity of the surrounding area
- Main concerns over air quality – emissions from traffic and the stack of the facility
- Traffic – increase in vehicle numbers is minimal, using guidance from the Institute of Air Quality Management the change in impact can be screened out as negligible
- Process emissions – fully controlled system, will need an Environmental Permit to operate, the technology is deployed across the UK on many other EfW projects

How does an Energy from Waste facility work?



Composition of Flue Gases

- What are the emissions from an EfW plant?



Air Quality - Impact

- Dispersion modelling to determine impact.
- Impact has been compared to the Air Quality Assessment Levels set for the protection of human health and ecosystems.
- Guidance from the Institute of Air Quality Management and the Environment Agency used to determine the significance of the impact.
- Conclusions – impact on human health and ecology would be negligible.

Climate Change

- Project has a net carbon benefit of ~58,000 tonnes per annum
- This contribution will assist in the Government's requirements to reduce carbon emissions and the approach is in line with UK Government guidance
- The calculation has accounted for:
 - CO2 and other greenhouse gases released from the combustion process and transport.
 - Grid offset to account for the electricity which the plant would be offsetting
- Compared to the counter case – Landfill which has accounted for:
 - CO2 and other greenhouse gases released from the landfill.
 - CO2 released from the landfill gas engines.
 - Grid offset to account for the electricity which the landfill gas engines would be offsetting
- A range of sensitivities are included in the assessment



Photomontage - Currently Approved Development



Photomontage - 2020 Proposed Development



Photomontage - Currently Approved Development



Photomontage - 2020 Proposed Development



Pre Event Questions Received

Transport

- NRE has increased the waste processing capacity to 243,000 tonnes per annum. Please explain what the traffic implications are for the people of Westbury?

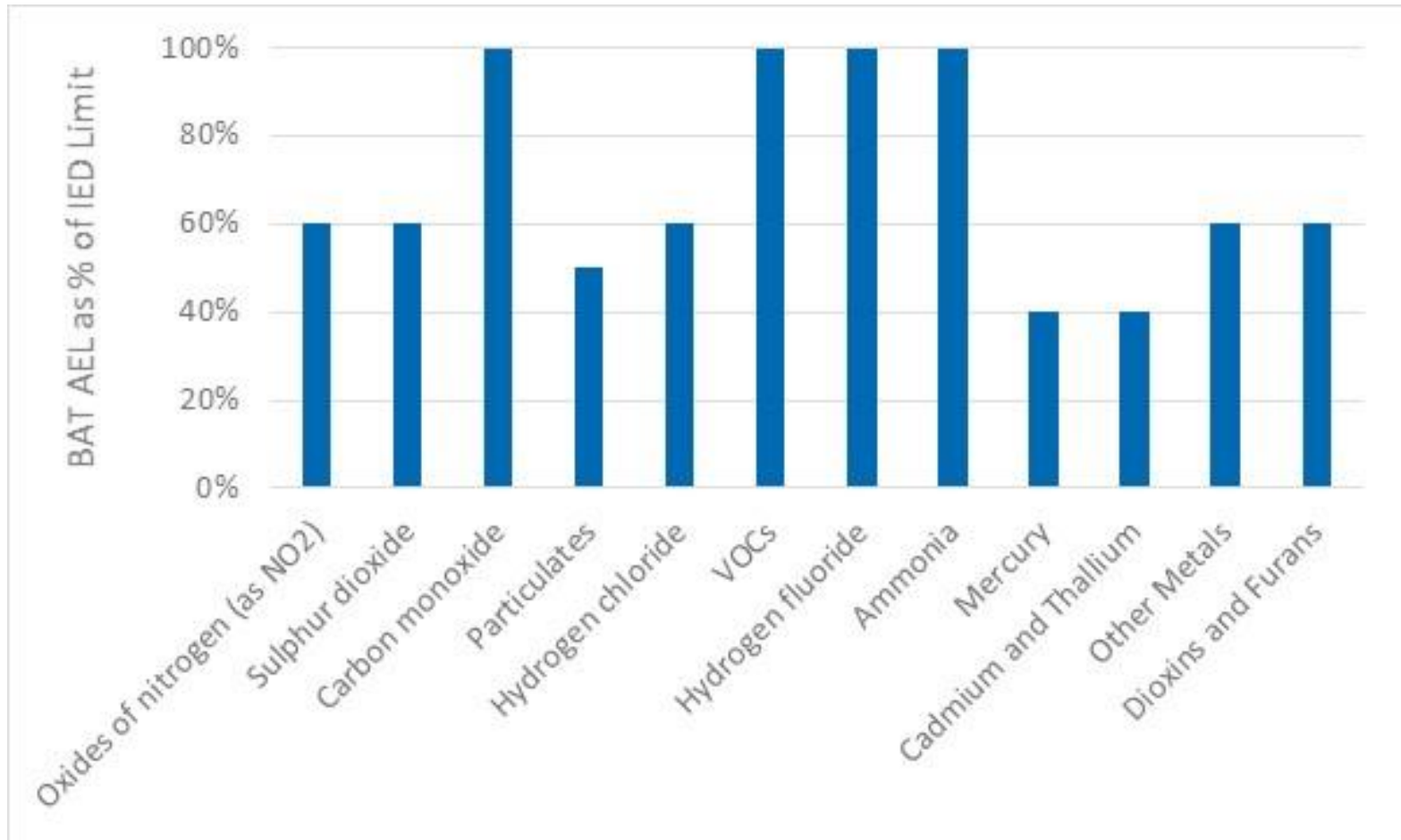
Emissions / Air Quality

- Please could you provide more information on very fine particles (PM10 and PM.25) which cannot be filtered out from incinerator emissions. On which areas of Westbury and surrounding villages do you estimate they would fall?
- Please could you provide more details on gaseous emissions from the plant comparing gasification solution to proposed moving grate incinerator?

Climate Change

- Could you please explain how your proposed changes will sit alongside the Government's avowed reduction in carbon footprint at a time when various court decisions have cited the government for failing to have in place a lawful plan to improve air quality?

Air Quality – Effect of BREF on emission limits



Air Quality - Particulates

- Measured as total particulate matter – includes all sizes including PM10, PM2.5 and PM1s etc.
- The Environment Agency has produced a briefing note in response to a report produced by UK Without Incineration (UKWIN)
- Control measure – bag filter
- Act in two ways – Absolute filtration and adsorption
- Very effective across the whole range of sizes – Fine Particle Emissions from Waste Incineration (Wilen et al, March 2007):
 - Abatement of total PM between 99.987% and 99.997%
 - Abatement of PM2.5 between 99.971% and 99.990%
 - Abatement of PM1 between 99.864% and 99.991%

2016 NAEI category	PM ₁₀	PM _{2.5}	NO _x
MSW incineration	0.057 kt = 0.03%	0.057 kt = 0.05%	9.97 kt = 1.12%
Domestic wood burning	38 kt = 22.4%	37 kt = 34.3%	5.1 kt = 0.57%
Cars, buses, lorries	9.1 kt = 5.35%	5.36 kt = 4.96%	298.9 kt = 33.5%
Total UK emissions	170 kt	108 kt	893 kt

(Source: <http://naei.beis.gov.uk>; kt = kilotonne i.e. 1000 tonnes)

What happens next?

- Material from this event will be made available on:

<https://northacre-energy.co.uk/downloads/>

- NREL pre application consultation to close **17 July**
- NREL to submit planning application to Wiltshire Council
- NREL to submit environmental permit application to Environment Agency shortly afterwards

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Contact us

- **On our website:**

www.northacre-energy.co.uk

- **By email:**

northacre@bioenergyinfrastructure.com

- **Write to us:**

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