

Design and Access Statement

Wheelabrator Technologies Inc

Wheelabrator Kemsley Generating Station (K3) and
Wheelabrator Kemsley North (WKN) Waste to Energy Facility) DCO

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The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

Regulation 5(2)(q)

Design and Access Statement

Applicant: WTI/EFW Holdings
(Wheelabrator Technologies Inc.)

Project: Wheelabrator Kemsley Generating Station (K3)
and Wheelabrator Kemsley North (WKN) Waste-
to-Energy Facility) Order

Date: September 2019 - Submission Version

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1. Contents and Glossary

Contents

- 1) Contents and Glossary
- 2) Context
- 3) Applicant and Project Team
- 4) Application Context
- 5) The Waste-to-Energy Process
- 6) Planning Policy Context
- 7) Site Location
- 8) Surroundings
- 9) K3 Development Overview
- 10) K3 Construction
- 11) K3 Layout
- 12) K3 Design
- 13) The WKN Site
- 14) WKN Development Overview
- 15) WKN - Design Parameters
- 16) WKN - Design Parameters
- 17) WKN Layout
- 18) WKN Illustrative Layout
- 19) WKN Design
- 20) K3 and WKN Developments
- 21) Landscape and Visual Impacts
- 22) Landscape and Visual Impacts
- 23) Sustainability
- 24) Access
- 25) Access
- 26) Summary
- 27) Summary

Glossary

- CGI - Computer Generated Image
CHP - Combined Heat and Power Plant
DCO - Development Consent Order
dDCO - draft Development Consent Order
EN-1 - Overarching National Policy Statement for Energy
EN-3 - National Policy Statement for Renewable Energy Infrastructure
HGV - Heavy Goods Vehicle
K3 - the Wheelabrator Kemsley Generating Station
KCC - Kent County Council
ktCO₂e- Carbon Dioxide emissions (measured in metric tons)
MW - Megawatt
MWth - Megawatt thermal
NPPF - the National Planning Policy Framework
NSIP - Nationally Significant Infrastructure Project
PINS - the Planning Inspectorate
RCV - Refuse Collection Vehicle
SoS - Secretary of State for Business, Energy and Industrial Strategy
WKN - the Wheelabrator Kemsley North Waste-to-Energy facility
WTI - Wheelabrator Technologies Inc.

1. Wheelabrator Technologies Inc. (“WTI”) has made an application to the Secretary of State for Business, Energy and Industrial Strategy (“SoS”) for a Development Consent Order (“DCO”) for the construction and operation of the Wheelabrator Kemsley (“K3”) and the Wheelabrator Kemsley North (“WKN”) waste-to-energy facilities on land at Kemsley, Sittingbourne in Kent.
2. Planning permission was granted for K3 under the Town and Country Planning Act 1990 by Kent County Council in 2012. Construction of the K3 facility began in July 2016 and is expected to be completed with the facility operational by late 2019. As consented K3 will have two 102 megawatt thermal (“MWth”) lines, be capable of processing up to 550,000 tonnes of waste per annum and have a generating output of up to 49.9 Megawatts (“MW”).
3. The Planning Act 2008 states that the construction or extension of an onshore generating station with a capacity of more than 50MW in England is considered by Section 14(1)(a) and Section 15 of the Act to be a ‘nationally significant infrastructure project’ (“NSIP”) and as such requires an application for a DCO to be made to the SoS, via the Planning Inspectorate (“PINS”).
4. WTI have identified that K3 is capable, through internal upgrades and efficiency improvements, of generating an additional 25.1MW of electricity, and through increased operational uptime of the facility of processing an additional 107,000 tonnes of waste per annum.
5. In order to properly categorise and consent the proposed increases under the Planning Act 2008 a DCO is being sought for the construction and operation of K3 to its total proposed generating capacity of 75MW and its total annual waste throughput of up to 657,000 tonnes. The K3 project is therefore an NSIP by virtue of it being the construction of an onshore generating station in England with a generating capacity of over 50MW under Section 14(1)(a) and 15(2) of the Planning Act 2008. In practical terms the effect of the proposed DCO would be K3, as consented and as currently being built and shortly to be operational, generating an additional 25.1MW of electricity and processing an additional 107,000 tonnes of waste each year.
6. Development Consent is also being sought for WKN which would be a single 125MWth line waste-to-energy facility capable of processing up to 390,000 tonnes of waste per annum, with a generating capacity of up to 42MW (“the WKN Proposed Development”). The WKN Proposed Development is not therefore an NSIP as its generating capacity is below 50MW. Instead WTI made a formal application on the 1st June 2018 to the SoS under Section 35 of the Planning Act 2008 for a direction as to whether the WKN Proposed Development together with any matters associated with it can be treated as development for which Development Consent is required. The SoS issued his direction on the 27th June 2018 confirming that WKN is to be treated as development for which Development Consent is required.
7. Consent for the K3 and WKN Proposed Developments is therefore sought via a single DCO through a single application to the SoS via PINS.

This Design and Access Statement

8. This Design and Access Statement forms part of the suite of documents submitted in support of the application which seeks development consent for the K3 and WKN proposed developments. It is a self contained summary of the K3 and WKN developments, with particular focus on the approach taken to design, access and sustainability within each project.

3. Applicant and Project Team

The Applicant - Wheelabrator Technologies Inc ("WTI")

1. The formal applicant as stated within the application is WTI/EFW Holdings Ltd, a subsidiary of Wheelabrator Technologies Inc. ("WTI"). For ease WTI are referred to as the applicant within this Statement.
2. WTI is the second largest US waste-to-energy business, and is an industry leader in the conversion of everyday residential and business waste into clean energy.
3. WTI currently has a platform of 25 strategically located assets across the US and UK – 19 waste-to-energy facilities (three under construction), two waste fuel facilities as well as four ash monofills. WTI also recover metals for recycling at two advanced metals recovery systems and one central upgrade facility.
4. WTI currently has an annual waste processing capacity of over 7.2 million tonnes and a total combined electric generating capacity of 732 megawatts—enough energy to power more than 671,100 US homes. WTI also recovers metals for recycling into commercial products.
5. The company's vision to develop, deliver and realize the potential of clean energy speaks to WTI's ongoing commitment to the development of clean energy solutions for its customers and local communities. WTI is owned by Macquarie Infrastructure and Real Assets, a business within the Macquarie Asset Management division of Macquarie Group and a global alternative asset manager focused on real estate, infrastructure, and agriculture and energy assets.
6. For more on WTI, please visit www.wtienergy.co.uk

The Project Team

The project team acting on behalf of WTI for the DCO application is as follows:

- Camargue - public relations
- DHA Environment - EIA co-ordinators;
- DHA Planning - planning consultants;
- Fichtner Consulting Engineers - CHP Assessment;
- Fieldfisher - legal advisors;
- GSDA - Project Architects;
- Hendeca - Waste Consultant;
- LRS - Land Referencing;
- RPS - Technical topic specialists;
- SLR - Carbon Assessments.

4. Application Context

1. The application seeks consent for the construction and operation of the K3 facility with a generating capacity of 75MW and an annual waste throughput of 657,000 tonnes per year. However in reality the K3 facility has already been substantially constructed under the terms of its 2012 planning permission (as subsequently amended). The original planning application made for the K3 facility included a Design and Access Statement (“the original Design and Access Statement”) which assessed and appraised the design proposed for the K3 facility and which provided an explanation of the evolution of the design at that stage. The original Design and Access Statement is included within the DCO application for information.
2. There are no external physical works required to facilitate the proposed increase in generating capacity and increased waste tonnage throughput which is the practical effect of development consent being granted for the K3 project. The design of the K3 facility would therefore remain as consented and as being constructed. However as the application does seek consent for the construction and operation of the K3 facility this Statement does provide an overview as to the design and access arrangements of the K3 facility.
3. This Statement then describes the WKN Site and its surrounding context and explains the rationale behind the siting, design and access arrangements of the facility.
4. This Design and Access Statement should be read in conjunction with the other documents provided within the application, in particular:
 - The Application Guide which provides a summary of the application [Document 1.2];
 - The Draft Development Consent Order and the Explanatory Memorandum [Documents 2.1 and 2.2];
 - The 2010 and 2019 Environmental Statement and Non Technical Summary which assess the likely significant environmental effects of the proposed scheme [Documents 3.1, 3.2, 3.3 and 3.4];
5. Reference is made throughout this document to the plans which accompany the DCO application and which comprise the following:
 - 5.1 - Site Location Plan
 - 5.2 - DCO Site Boundary Plan
 - 5.3 - DCO Site Boundary Plan - Aerial
 - 5.4 - Land Plan
 - 5.5a - K3 Works Plan
 - 5.5b - WKN Works Plan
 - 5.6 - WKN - Parameters Plan
 - 5.7 - WKN - Illustrative Layout Plan
 - 5.8 - WKN - Illustrative Elevations
 - 5.9 - K3 and WKN - Connection and Tie-In Plan
 - 5.10 - K3 and WKN Illustrative CGI
 - 5.11 - Nature Conservation Designations Plan
 - 5.12 - Habitats Plan
 - 5.13 - Water Bodies Plan
 - 5.14 - Heritage and Conservation Designations Plan
6. Reference is also made where relevant in this Statement to the K3 ‘approved plans’ which have been submitted as part of this application and which would be certified within the DCO to reflect the as built design of the K3 facility.

5. The Waste-to-Energy process

1. The K3 and WKN facilities will both operate in the same way.
2. Post recycled waste will be brought to the facilities in heavy goods or refuse collection vehicles. Once at the tipping hall the vehicles deposit the waste into the fuel (waste) bunker.
3. Overhead cranes then transfer the waste from the waste bunker into a feed hopper to the boiler. Inside the boiler, an inclined, reciprocating, metal grate will slowly move the waste through a controlled thermal (heating) process, at temperatures exceeding 1000°C.
4. The combustion of the waste produces hot gases which will then subsequently pass through a series of boiler tubes filled with water, creating high-pressure steam. This steam is used to drive a turbine in the turbine hall and produce electricity. The electricity produced will be exported to the distribution network.
5. Once the steam has passed through the turbine generators it is cooled by way of transfer to the air-cooled condenser units. As the steam loses heat it cools and then condenses and is fed back into the feed water tank ready for re-use in the waste-to-energy process. In the case of K3 steam would be transferred to the Kemsley Paper Mill for use within the production process. WKN will be able to supply steam to the paper mill, via K3, at times when K3 is not operating (for example when being maintained) and also has the ability to export steam to other customers.
6. Once heat from the hot combustion gas is absorbed into the boiler tubes to produce steam, the gas exits the boiler into the gas treatment facility. Once in the treatment facility it is treated to remove pollutants and emitted via the stack and dispersed into the atmosphere.
7. Residual bottom ash from the waste combustion process is exported from

the facility and either landfilled or used as an aggregate by the construction industry. Prior to disposal, any leftover ferrous metals such as iron and steel are extracted from the ash residue and sent to recycling facilities.

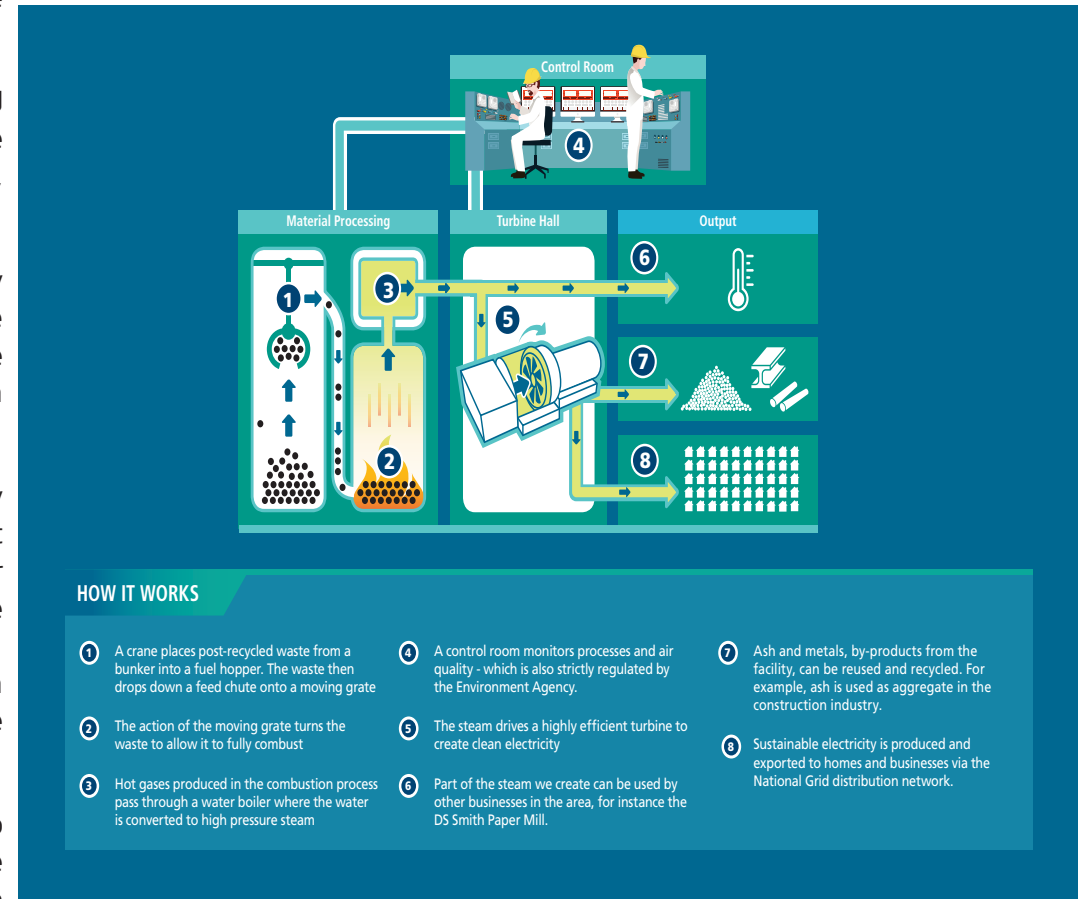


Figure 5.1: Process diagram showing the waste-to-energy process

6. Planning Policy Context

Context

1. The Planning Act 2008 states at 10(3)(b) the desirability of mitigating and adapting to climate change and achieving good design.
2. As set out in full within the Planning Statement [Document 4.2], the K3 proposed development is a Nationally Significant Infrastructure Project as it is an onshore generating station in England with a generating capacity of over 50MW. The SoS will therefore determine the K3 element of the application in accordance with the relevant National Policy Statements, which in this case are EN-1: The Overarching National Policy Statement for Energy, and EN-3: the National Policy Statement for Renewable Energy Infrastructure. WKN is not an NSIP, as its generating capacity is below 50MW. The WKN element of the application will not therefore be determined in accordance with the NPS's, but they remain important and relevant considerations.

EN-1

3. EN-1 makes clear that high quality and inclusive design goes beyond aesthetic considerations and includes the functionality of an object in terms of it being fit for purpose and sustainable. In respect of energy projects the expectation of EN-1 is that good design will produce sustainable infrastructure sensitive to place, efficient in terms of resources used in construction, together with a good aesthetics in terms of appearance. It is acknowledged within EN-1 that the nature of energy infrastructure development will often limit the extent to which the quality of an area can be enhanced.

4. EN-1 requires energy infrastructure projects to demonstrate that they are sustainable, attractive, durable and adaptable, whilst taking account of functionality and aesthetics. Applicants are expected to take opportunities for good design in terms of siting in respect of landscape character, landform and vegetation. EN-1 requires applicants to demonstrate how a design process was conducted and how the proposed design has evolved.

EN-3

5. EN-3, at Paragraph 2.4.2, states that applicants for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology.
6. Paragraph 2.5.30 deals with 'flexibility in the project details' and recognises that waste combustion operators may not know the precise details of all elements of the proposed development until after development consent is granted. EN-3 acknowledges that some flexibility may be required in the consent, and states that the applicant should assess the maximum-adverse case scenario. That element of EN-3 is relevant to the use of design parameters in respect of WKN, which is discussed at Section 15 of this Statement.

National Planning Policy for Waste

7. Whilst written in respect of decisions by waste planning authorities, Paragraph 7 states that when determining waste applications it should be ensured that waste management facilities in themselves are well designed, so that they contribute positively to the character and quality of the area

in which they are located.

The NPPF

8. At Paragraph 124 the NPPF makes clear that the Government attaches great importance to the design of the built environment, with good design a key aspect of sustainable development and indivisible from good planning. In that respect the NPPF notes it is important to plan positively to achieve high quality and inclusive design for all development.

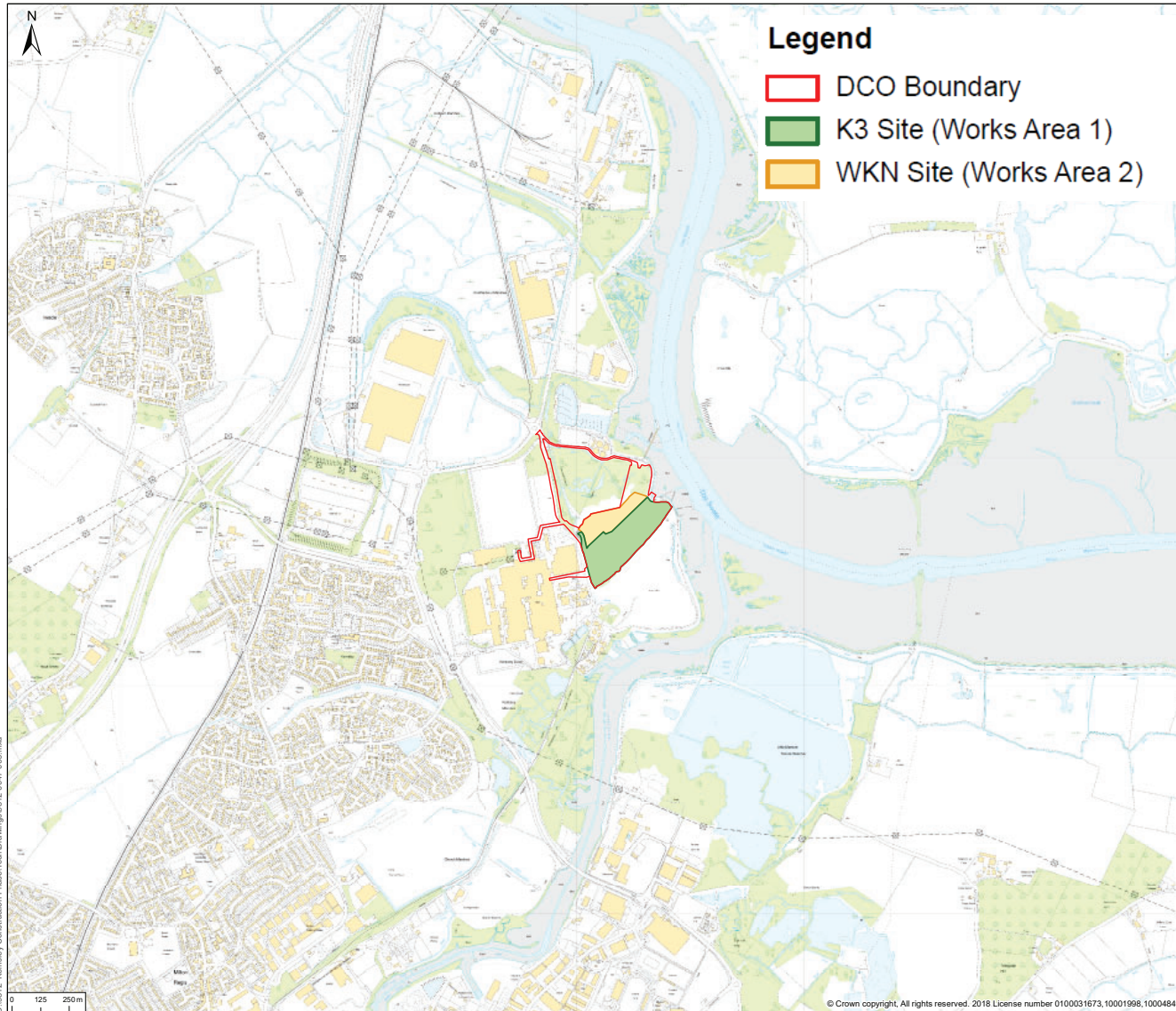
Kent County Council Minerals and Waste Local Plan 2013 – 31

9. Policy DM1 Sustainable Design states that proposals for waste development are required to demonstrate that they have been designed to protect and enhance the character and quality of the site's setting.

The Swale Local Plan (Bearing Fruits 2031)

10. Policy CP4 requires all new development proposals to be of a high quality design which is appropriate to the surroundings. A number of the elements of the policy are not applicable to a development of the nature proposed, but Part 4) requires the efficient and prudent use of natural resources and 6) requires landscape, biodiversity and local environments to be conserved and enhanced.

7. Site Location



1. The K3 and WKN Sites lie to the north east of Kemsley, which forms part of the wider urban area of Sittingbourne. Sittingbourne is situated approximately 2.6km south of the Sites.
2. The Swale estuary separates the Isle of Sheppey from mainland Kent and runs to the north and east of the Sites. The land to the north and east of Sittingbourne and in the south-western part of the Isle of Sheppey is predominantly flat low lying grazing and marsh land.
3. The A249 runs north from the M2 motorway and provides a key arterial route through the area to serve both Sittingbourne and the Isle of Sheppey. The Sites are accessed via the Grovehurst Road junction off the A249 which provides access to Kemsley to the east and the village of Iwade to the west. The A2 runs east to west through the centre of Sittingbourne and connects the town with Faversham to the east and Newington and the Medway Towns to the west. The M2 runs further to the south and provides similar connections, and further to the south the A249 then also connects with the M20 motorway.

8. Surroundings

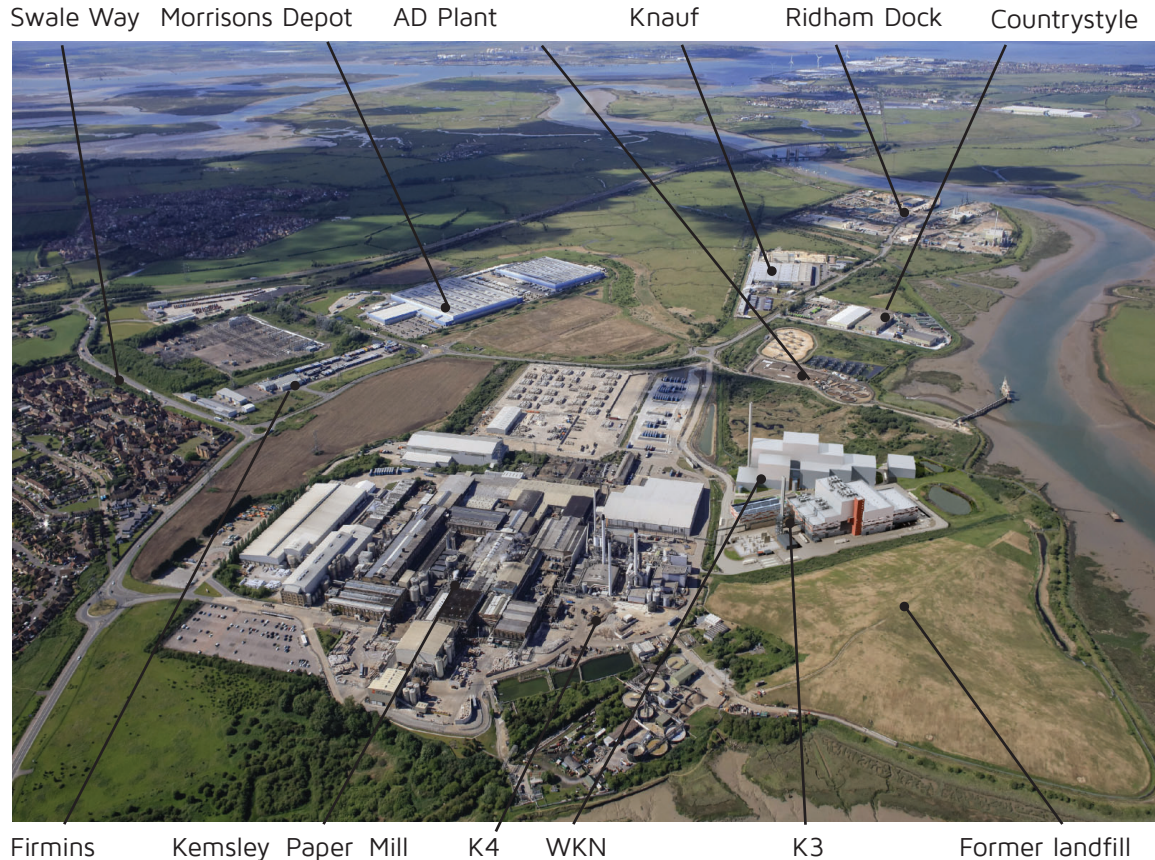


Figure 8.1: K3 and WKN Site Context

1. The K3 and WKN CGI illustrates the scale of the facilities in the context of their immediate surroundings.
2. The immediate context is dominated by the extensive Kemsley Paper Mill complex, immediately to the west of the K3 and WKN facilities. The paper mill was first constructed in 1924 and has continued to evolve and expand since. DS Smith, the operators of the Kemsley Paper Mill, obtained Development Consent in July 2019 for the construction of K4, a gas fired Combined Heat and Power plant, to serve the paper mill which will be developed on land within the eastern part of the paper mill complex.
3. To the north of the K3 and WKN sites lies an area of scrubland, beyond which sits an anaerobic digestion plant serving the Kemsley Paper Mill. The AD plant has only been completed relatively recently and therefore does not appear in its completed form within the CGI. Beyond the AD plant, to the north and north-west of the site are further industrial premises of Countrystyle, Knauf, the Ridham Dock and the Morrisons Distribution Depot. The jetty to the north-east of the WKN facility is used by Knauf for the importation of gypsum. The area to the east of the Morrisons depot is allocated for further industrial/commercial development, as is the area immediately to the west of the Kemsley Paper mill.
4. To the south of the K3 Site lies a capped former landfill immediately north of the confluence between Milton Creek and the Swale Estuary. The Swale Estuary lies immediately to the east of the K3 and WKN sites, beyond which lies the Isle of Sheppey.
5. The A249, an important route running from Maidstone to the Isle of Sheppey, can be seen to the west just beyond the Morrisons Depot.

9. K3 Development Overview

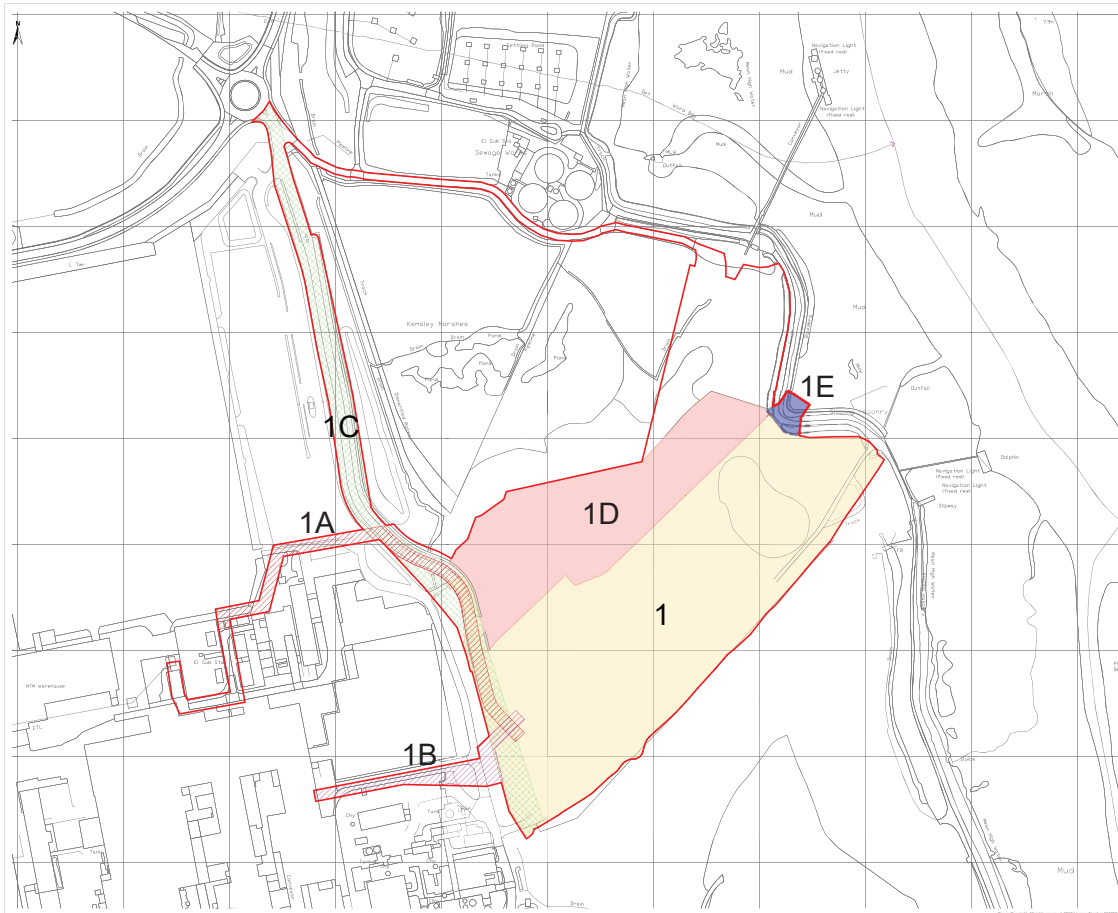


Figure 9.1: K3 Works Plan

1. The K3 proposed development comprises the following works and associated development, as shown on the K3 Works Plan [Document 5.5a]:
 - **No1** - An electricity generating station (K3) with a gross installed generating capacity of 75MW;
 - **No1A** - Installation of grid connection for K3

Associated Development

 - **No1B** - Installation of steam connection for K3 Associated Development;
 - **No1C** - Alteration of existing private access road to construct, use and maintain K3
 - **No1D** - Creation of a temporary construction compound and laydown area
 - **No1E** - Construction and operation of a surface water outfall for K3
2. The layout and design of the K3 facility is then shown within the K3 approved plans, which are as listed at Schedule 3 of the dDCO. Planning permission was originally granted for K3 in 2012, following which there have been a number of non-material amendments to the site layout and the design of K3, together with variations to the consent itself and details submitted to discharge conditions. The K3 approved plans and documents, as listed within the dDCO, represent the current set of as built planning drawings, together with details relating to elements such as landscaping and lighting.

10. K3 Construction



K3 facility under construction, July 2019

1. The construction of K3 began in July 2016. At its peak there have been some 642 construction workers on site. The facility is now substantially complete and will shortly begin commissioning with the expectation being that K3 will be operational by the end of 2019, to its consented generating capacity of 49.9MW and with its consented waste throughput of 550,000 tonnes per annum.

1. The original Design and Access Statement provides a full rationale and appraisal for the layout and design proposed for K3 within the original planning application.
2. The layout, scale and design of facilities such as K3 will generally be led in the first instance by the process they are seeking to accommodate, as noted within the original Design and Access Statement.
3. In layout terms the first consideration was creating a layout which ensured that the location of individual buildings were a direct response to the functional process of the facility, together with external circulation spaces, parking, landscaping and drainage. Various amendments have been made to the layout of the K3 facility since the original planning permission was granted, but the changes have not been fundamental as the layout remains driven by the waste-to-energy process.

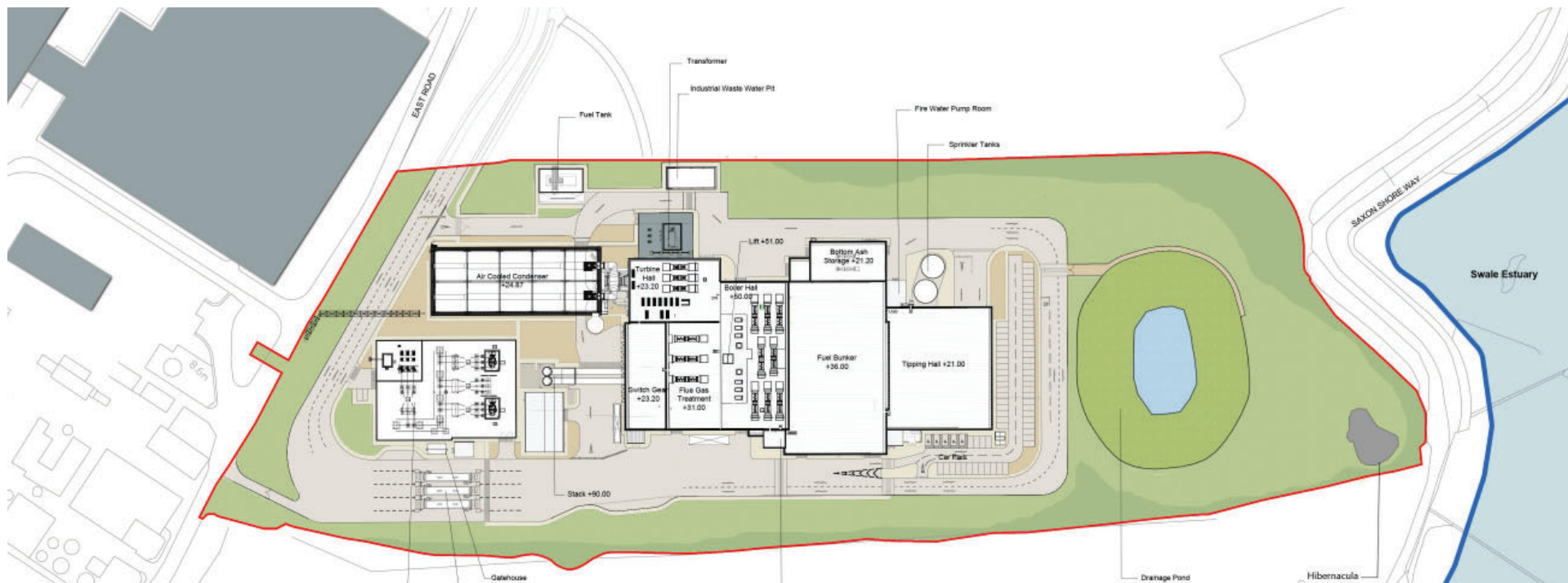


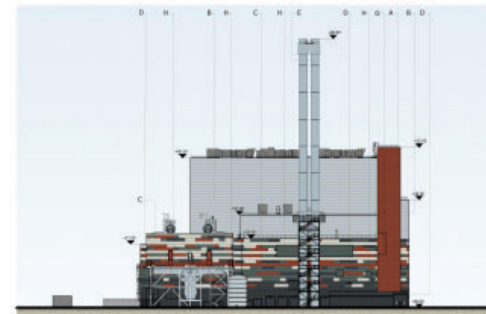
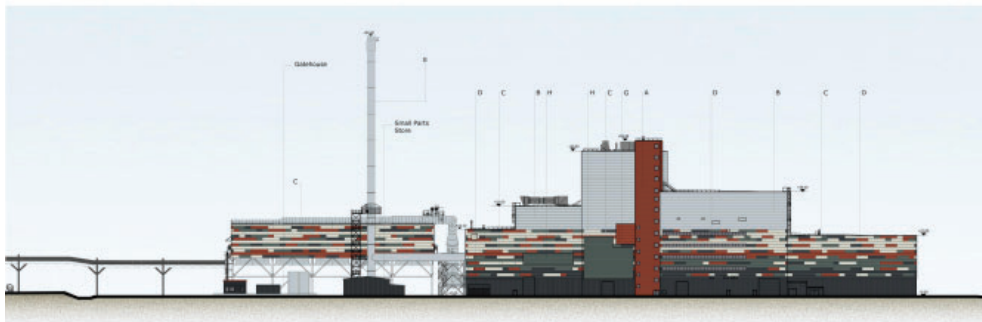
Figure 11.1: K3 Consented Layout

12. K3 Design



The original Design and Access Statement documents the design evolution of the K3 facility and in particular Section 3.1.4 of the original Design and Access Statement notes that a conscious decision was taken to express the functional form of the buildings within the K3 facility rather than to try and conceal them, with the use of natural colours within the articulation of the elevations used to provide cohesion between the different building elements. The natural colour scheme within the landscape band within which K3 sits was identified as being deep red brick and browns, which were therefore used within the design - the intention being (as set out in the original Design and Access Statement) to provide something of a landmark building rather than attempting to hide the structure and failing to do so due to its size. The wrapping of the basic functional elements of the building in coloured cladding is intended to reduce the visual height of the building, when combined with layers of neutrally coloured cladding at higher levels.

Figure 12.1: Consented K3 elevations



13. The WKN Site

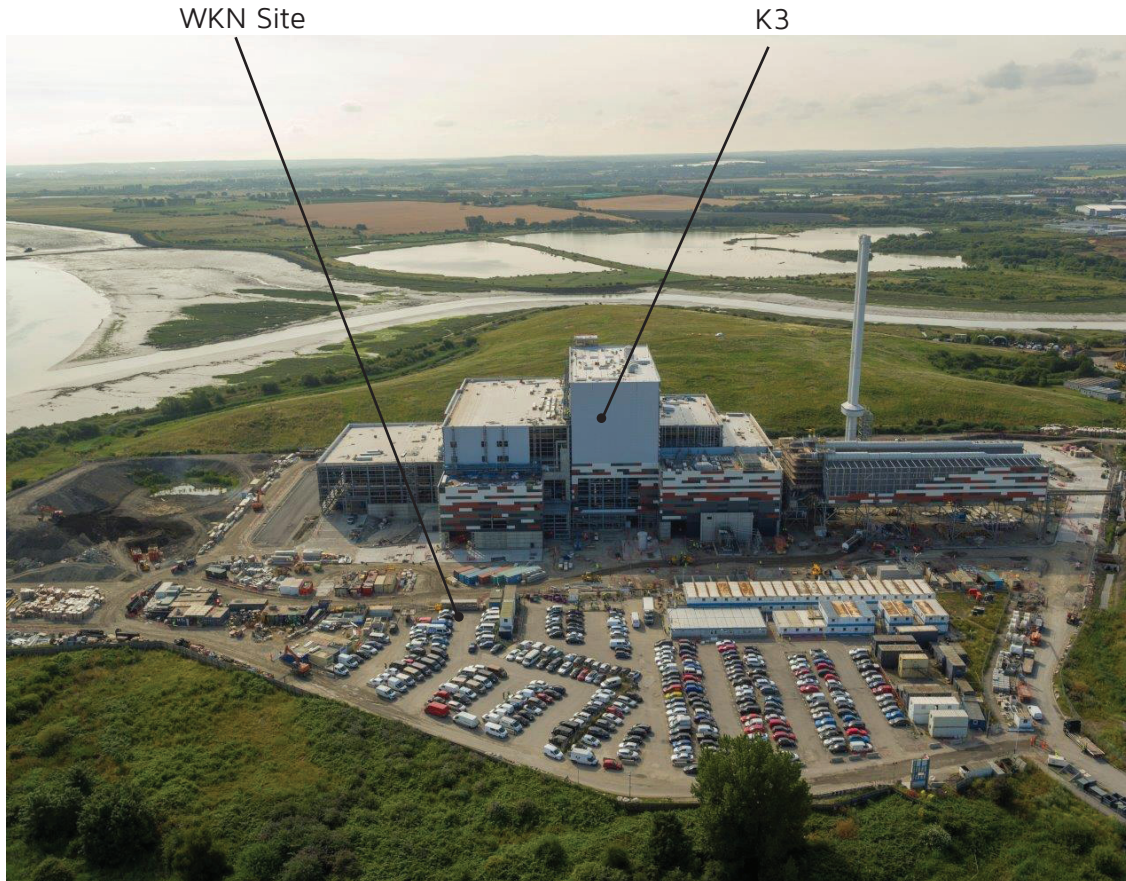


Figure 13.1: Aerial view of the WKN site

WTI has identified a need for additional waste processing capacity in the south-east region for post-recycled waste. The selection of the WKN Site to help meet this need is directly related to the presence of K3 and a number of other reasons as set out below:

- Availability of existing supporting infrastructure including connection to the grid and water supplies;
- Economies of scale associated with adjoining facilities;
- Location within an existing industrial area
- The results of preliminary environmental studies that indicated that there was sufficient environmental carrying capacity in the area to support the development.

The WKN Site is currently being used by WTI as a laydown and parking area for the construction of the adjacent K3 facility. The WKN Site has been cleared of vegetation and laid to concrete or hardcore with a perimeter fence.



Figure 14.1: WKN Works Plan

The WKN proposed development comprises the following works and associated development:

- **No2** - An electricity generating station with a gross installed generating capacity of up to 42MW (WKN)
- **No3** - Installation of grid connection for WKN

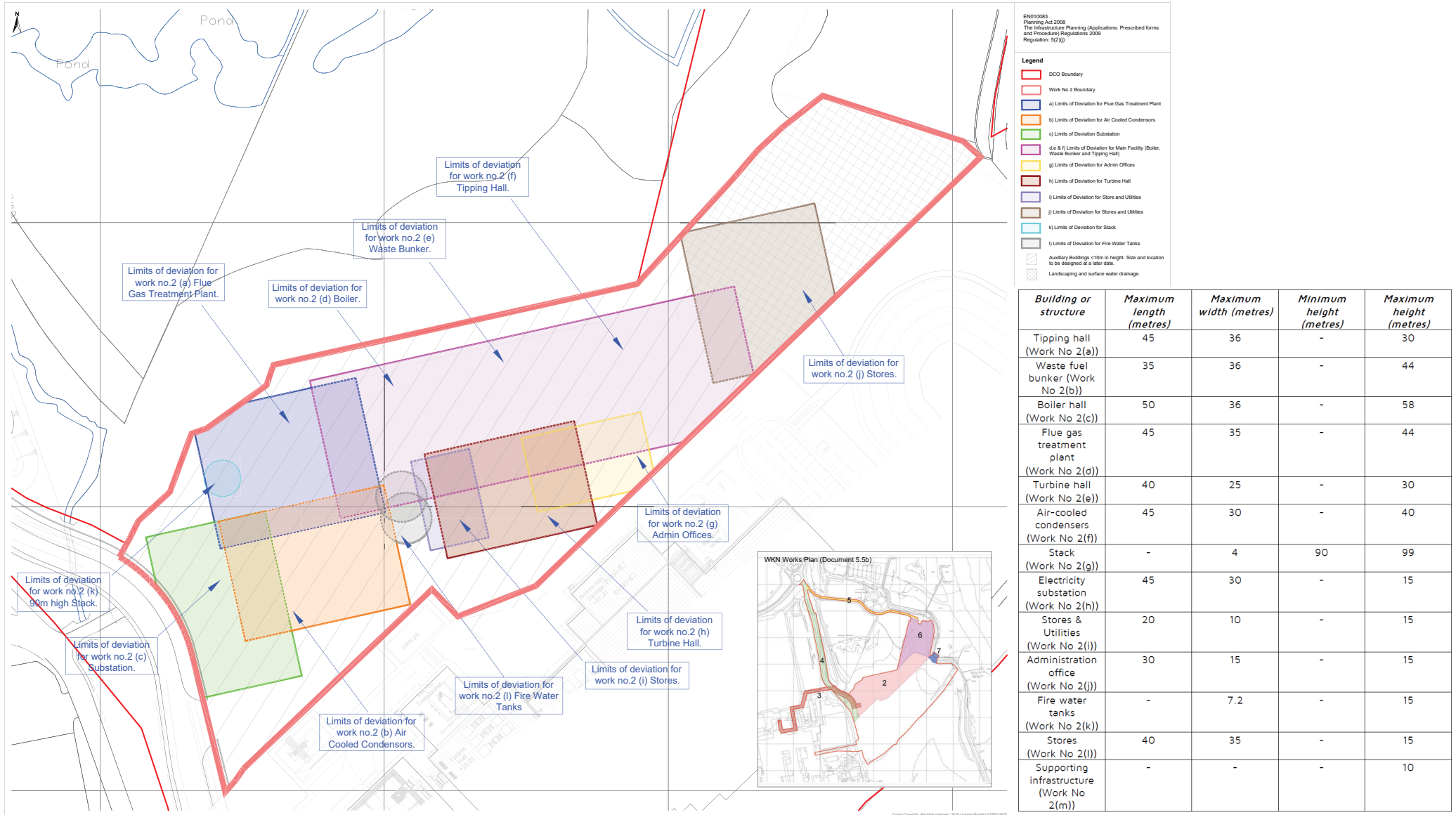
Associated Development

- **No4** - Alteration of private access road to construct, use and maintain WKN
- **No5** - Temporary construction or alteration of existing private haul road for the construction of WKN
- **No 6** - Creation of a temporary construction compound and laydown area for the construction of WKN
- **No7** - Construction and operation of a new surface water outfall for WKN

The grid connection for WKN would comprise an underground cable and ducting which would follow the same route to the same substation as the K3 electricity connection. WKN would then use the same private access road as that serving K3 for construction, operation and maintenance. In addition it is proposed that a construction laydown area would be created on land to the north-east of the WKN site and would be accessed by using the existing road which runs to the Knauf Jetty, to the north of the WKN site, adjacent to the DS Smith anaerobic digester. A surface water outfall headwall has already been constructed to allow for the discharge of clean surface water from a lagoon on the K3 site into the Swale. Work No7 provides for works to that existing surface water outfall to allow for a similar discharge of clean surface water from the lagoon proposed to serve the WKN development.

1. Work No.2 provides for the construction and operation of the WKN Proposed Development. WKN would comprise the following key buildings; a tipping hall, waste fuel bunker, boiler hall, flue gas treatment plant, turbine hall, air cooled condensers, a single stack, an electricity substation, a stores and utilities building, an administration office, fire water tanks and stores.
2. The technical design of the facility has not yet been finalised, as that would take place following the appointment of an appropriately experienced contractor and once contracts are placed with equipment suppliers, should development consent be granted.
3. Within the application a set of development parameters have therefore been provided in order to allow for flexibility in the final layout and design of the facility, whilst providing sufficient certainty regarding the likely layout, design and scale of the proposed facility in order to allow for an accurate environmental impact assessment to be carried out of the proposed development and for the application to be assessed and determined with sufficient clarity. That approach is recognised in EN-3, as set out in Section 6 of this Statement.
4. The parameters comprise a combination of the WKN Parameters Plan [Document 5.6] and the maximum length and width and minimum and maximum heights provided within Table 1 at Requirement 13 of the dDCO. The WKN Parameters Plan and Table 1 are replicated overleaf in Section 16 of this Statement.
5. The size parameters have been created by formulating a preliminary design for the WKN Proposed Development and defining maximum expected dimensions for the various individual elements of the facility by applying a 10% buffer to allow for flexibility. The WKN Parameters Plan then creates a zone which allows for each of the main items to move by 5m in any direction.
6. It would not be physically possible for each of the main plant items to be built to its maximum dimension in length and width terms. However each main plant item is provided with flexibility in terms of its size and position within the site, and for the purposes of environmental impact assessment a credible worst case scenario can be assessed.
7. The air quality assessment undertaken within the Environmental Impact Assessment assesses a minimum stack height of 90m as a worst case scenario, as typically air quality impacts will increase as the height of a stack reduces. In order to provide certainty in terms of the assessment of landscape and visual impacts a maximum stack height of 99m is set.
8. A general parameter is set across the WKN site for the installation of supporting infrastructure, to a height limit of 10m. That ensures that supporting elements such gate houses, parking, access roads etc. can be placed where required once the location and design of the main plant items is finalised. A further general parameter area is identified for the provision of landscaping and a surface water drainage lagoon.
9. Requirement 13 of the dDCO requires the undertaker to submit to the local planning authority for approval written details of the siting, layout, scale and external appearance (including colours, materials and surface finishes) of all permanent buildings and structures within the WKN development. The Requirement states that the approved details must be in accordance with the stated parameters. Requirement 13 of the dDCO does make provision for the relevant planning authority to consent amendments to the stated parameters, but only where it has been demonstrated that any changes would not give rise to any materially new or materially different environmental effects in comparison to those assessed within the application.

16. WKN - Design Parameters



1. The illustrative layout of WKN, which has formed the basis of the parameters stated within the dDCO, has evolved as a response to the specifics of the WKN site together with the functional and process driven nature of the waste-to-energy process.
2. The WKN site is consistent with the area of land being used as the K3 laydown area; it is an irregular shaped area of land which is significantly smaller, at 2.5 hectares, than the 5.5 hectare K3 site. It is primarily for that reason that WKN is a single line facility, as the site is not of a sufficient size to accommodate a two line facility such as K3.
3. The key considerations which informed the WKN parameter plan therefore related to a combination of operational needs, but also the context of the surrounding area, and are as follows:
 - the irregular shape of the WKN site, which in particular limited the potential locations of the tipping hall, bunker, boiler and the associated positions of the turbine, flue gas treatment and air cooled condensers;
 - the location of the vehicular access into the site, via the existing access road to the west of the WKN site;
 - the views into the site from the nature reserves on the Isle of Sheppey, the proximity of the site to the Swale Estuary and the associated need to provide a landscaped buffer area, which led to the main buildings being located away from the eastern extent of the site;
 - the provision of a surface water lagoon close to the existing outfall point into the Swale estuary;
 - the relationship and interfaces between the WKN facility and the constructed K3 facility to the south.
4. Alongside those considerations the illustrative layout, and therefore the WKN parameters, reflect the intention to minimise the size and footprint of individual elements of the facility where possible, together with ensuring that the buildings are located in a logical way which reflects the waste-to-energy process.
5. The main core buildings (the tipping hall, bunker hall, boiler hall, flue gas treatment and stack) are arranged in a linear manner through the centre of the site, with the irregular shape of the site limiting the potential locations for the core buildings. That allows the air cooled condensers in particular to be located as far as possible from the northern boundary and close to those installed for K3. That would ensure that the main buildings help to acoustically screen the outdoor plant areas, such as the air cooled condensers, from the more noise sensitive areas to the west and north-west of the WKN site. The location of the offices and welfare area to the south of the main buildings would also help avoid light spillage arising from those elements of WKN into the Swale estuary to the north.
6. The WKN facility needs to provide an efficient and safe internal access arrangement, given drivers unfamiliar with the site could be accessing the tipping hall to deliver waste, to provide appropriate space for the manoeuvring of HGV's and RCV's, to ensure the safe interaction of delivery vehicles, other staff vehicles and any pedestrians, and to ensure that no queuing or manoeuvring of delivery vehicles on areas outside the site, given that could potentially conflict with waste deliveries arriving at K3. Furthermore the location of the tipping hall and access needs to be sufficient to create a ramp which ensures that the vehicle tipping point is elevated to 10m, to ensure efficient waste delivery.

18. WKN Illustrative Layout



1. As noted within this Statement the design of the WKN facility has not yet been finalised. Requirement 5 within the dDCO would provide the relevant planning authority (in this case Kent County Council) with the authority to assess and consent the final proposed design, which in addition to the layout and scale of the buildings would include the design detailing.
2. KCC were the determining authority for the K3 facility, which takes the approach of using a combination of graduated panels in colours which reflect the local palette, to ensure that K3 can become something of a landmark building within the area; an approach which was taken to avoid attempting to hide the K3 facility when the scale of it means that it is likely to be visible in any case.
3. The core approach taken to WKN, in order to define the parameters for the DCO application, reflects the approach taken to K3 in terms of the building appearing as a linked set of individual buildings, rather than having elements of the facility located within an overall 'shell'. It would then be possible to use colour to make the WKN facility cohesive as a whole. In terms of the approach taken to the colour and cladding of the buildings there remains the option with WKN to take a similar design approach to K3, or to pursue an alternative design approach if that is considered appropriate.
4. Should development consent be granted then WTI, alongside appointing contractors and equipment suppliers, would develop a final design approach for the WKN facility and would review that design approach with KCC as part of the work to discharge Requirement 5.

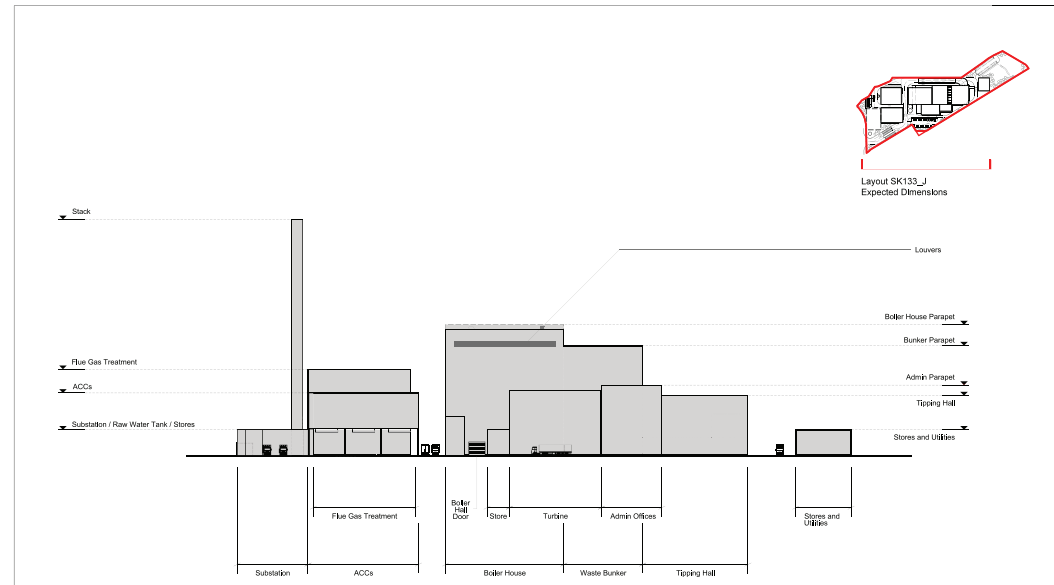


Figure 19.1: WKN Illustrative elevation

20. K3 and WKN Developments



Figure 20.1: Aerial view showing the K3 and WKN developments in context

1. Chapter 12 of the Environmental Statement (ES) [Document 3.1] addresses Landscape and Visual Resources whilst the Planning Statement appraises the anticipated landscape and visual impact against the generic policies relating to that issue within EN-1.
2. There are no designated landscapes within the DCO boundary, although the North Kent Marshes Special Landscape Area (SLA) covers the Swale and neighbouring areas, including the Chetney and Greenborough Marshes along Milton Creek to the south.
3. Whilst development consent is being sought for the construction and operation of K3, the practical effect of the DCO being granted (given K3 is already substantially complete) would not involve any external physical works to the K3 facility. The landscape and visual impacts of K3 were assessed in the 2010 Environmental Statement and the KCC Committee Report, in assessing the 2010 application, concluded that there were no overriding landscape objections to the K3 proposal based on a number of considerations including the scale of surrounding development, the wider industrial context of the immediate area and the use of a graduated colour scheme to help absorb the K3 development into the industrialised landscape around it.
4. Large scale industrial buildings and chimneys at the Paper Mill and K3 form the western and southern WKN Site boundaries and separate the location from the residential districts of Sittingbourne. This urban area is defined as the Sittingbourne Industrial Commercial townscape character area. The Industrial/commercial character area has been identified as having a poor quality and condition due to the extensive industrial buildings and infrastructure and the presence of disused and derelict land resulting in a low value.
5. The WKN Site is currently not visible in views from the majority of the settlement of Sittingbourne due to industrial development on the edge of the town and the restored landfill mound to the south. To the east of the WKN Site the channel of the Swale and low-lying landscape of the Isle of Sheppey allow more open, longer distance views. Key receptors of potentially high sensitivity and susceptibility to change in view as a result of the proposals include walkers using the Saxon Shore Way long distance footpath (ZU1/2) beside the Swale and Milton Creek.
6. The greatest number of visual receptors with views towards the WKN Site would be the occupants of vehicles travelling on Swale Way.
7. The new buildings and infrastructure which form the WKN Proposed Development, although large in scale, would form an extension of the existing character of neighbouring development at the Kemsley Paper Mill. The proposed buildings and structures would generally be visible in front of or in the backdrop of existing large scale industrial buildings at Kemsley Paper Mill. The tops of flue stacks are likely to be the only visible element, beside other stacks in views from the south and west. There will be no locations where new industrial buildings or structures at the WKN Site would be seen in a view that does not already contain views of large areas of existing industry.
8. The effect on existing landscape character and visual resources of the WKN Proposed Development is not considered significant.
9. The direct cumulative effects of other extensive proposed development in the locality and indirect effects of the WKN Proposed Development are predicted to result in a substantial adverse cumulative effect during the day time on the rural character of the Chetney and Greenborough Marshes and Iwade Arable Farmland character areas which is significant. However, the WKN Proposed Development would make a negligible contribution to this cumulative effect which would occur even in its absence through the other

cumulative projects identified in the ES.

10. The WKN Proposed Development in combination with the other cumulative developments identified would result in a significant adverse effect on sequential views along the Saxon Shore Way public right of way. This is an inevitable effect of the quantum of development permitted or proposed in this locality, reflective of its industrial context. However, the WKN Proposed Development in its own right is considered to make a negligible contribution to the cumulative effect which would occur even in its absence.

11. The design details to be defined under Requirement 5 will ensure that WKN Proposed Development would be clad in non-reflective materials and be of an appropriate colour to reduce its visual impact when viewed against both the skyline, K3 and the existing Paper Mill.

12. A detailed landscape proposal scheme does not form part of the DCO application but will be secured by way of Requirement 14 attached to the DCO. The design will reference key landscape features and qualities found within the surrounding Swale Borough landscape character areas and responds to the landscape scheme which will be delivered as part of the neighbouring K3.

13. EN1 notes that all proposed energy infrastructure is likely to have visual effects for many receptors around proposal sites. In this case, and in accordance with EN-3, the broad design proposed for WKN is intended to minimise its visual and landscape impact, in the same way that K3 was designed to minimise its impact. The impact in visual terms of WKN (and K3) is reduced by the heavily industrialised context around it, but it is also the continued development of that industrialised

context which generates, cumulatively with K3 and WKN, the significant effects which are identified in the ES in landscape and visual terms, which would occur even without the development of K3.

Figure 22.1 - An example of the photomontage views presented within the ES. In order to assess a worst case scenario the photomontage views take the maximum parameters for all main buildings.



Environmental Sustainability

1. The K3 carbon assessment concludes that the project will deliver significant carbon benefits, both in terms of the facility as a whole treating up to 657,000 tonnes of waste and in terms of the practical effect of the K3 proposed development being the ability of the facility as being constructed to process up to an additional 107,000 tonnes of waste per year. The processing of an additional 107,000 tonnes of waste would lead to a net avoided burden of between 59.5 to 63.3ktCO₂e in 2020. The treatment of waste at the K3 facility would then generate both steam for export to the Kemsley Paper Mill and electricity to the distribution network, thereby providing further sustainability benefits arising from the K3 proposed development.
2. Similarly K3 would be capable of treating some 390,000 tonnes of waste per annum, leading to further diversion of waste from landfill and treatment of waste domestically. The approval of the application would be expected to lead to a net avoided burden of around 63.8 to 98.3ktCO₂e in 2020. The WKN facility would export electricity to the distribution network and would then be capable of exporting steam to both the paper mill (via K3, at times when K3 is not operational) as well as to other suitable customers.
3. Both K3 and WKN are subject to a Rail and Water Transportation Strategy which ensures that the potential for waste to be delivered to site via alternative methods will continue to be regularly reviewed.
4. Around 5000 trees and shrubs will be planted on the K3 site, alongside areas of grassland and reedbed, in accordance with the K3 approved landscaping scheme. The planting scheme for the WKN facility has not yet been finalised, but an area of land in the eastern part of the WKN site would be landscaped.
5. The construction of WKN would be controlled by a Construction Environment Management Plan which will prevent any environmental impacts arising from

the construction process. The materials used within the construction of K3 have been selected to ensure they are appropriately durable and robust and a similar approach would be taken to the specification of the WKN facility.

Economic and Social Sustainability

6. At its peak the construction of K3 involved a workforce of some 642 people and was therefore a significant employer with associated economic benefits within the local area for services and accommodation to serve the construction workers. When operational K3 will employ up to 49 staff.
7. The K3 planning permission was the subject of a S106 legal agreement which included an Employment Strategy which sought to ensure that local companies and individuals were provided with opportunities to benefit from contracts and work opportunities arising from the construction and operation of the K3 facility. The Employment Strategy has been implemented in respect of the construction of the K3 facility and continues to be implemented in respect of the employment of permanent employees, and for that reason is included within the application as a K3 document to be certified within the DCO.
8. WKN is similarly expected to employ around 482 people during the peak construction period, if development consent is granted. It would then also employ between 35 to 49 staff. Requirement 29 of the dDCO requires an Employment, Skills and Training Program to be approved in order to ensure that, like K3, local companies and individuals would benefit from the construction and operation of the WKN facility.
9. WTI are committed to being a good neighbour to the communities within which they operate and have provided a community benefit fund for local groups and organisations for use in community initiatives.

Context

Both the K3 and WKN facilities have good road links with the national highway network via the A249 which provides an arterial route running north to south and which links to both the M2 and M20 motorways, which in turn provide links to the M25 or east Kent. The A249 lies some 1.5km to the west of the WKN Site and is accessed by Swale Way from the main Kemsley mill entrance and by Barge Way and Swale Way from the northern entrance to the mill.

There is a network of combined footway and cycleways along the northern side of Barge Way and the southern and south-western sides of Swale Way, which link to both the nearest residential areas in Kemsley as well as to the wider urban area of Sittingbourne. Pedestrian and cycle access to the K3 and WKN facilities is therefore good.

The K3 and WKN sites are close to the Saxon Shore Way long distance footpath which runs along the shore of the Swale close to the Kemsley Paper Mill. In addition the National Cycle Network Route 1; a long distance route connecting Dover and the Shetland Islands passes along the nearby Grovehurst Road between Sittingbourne and Kemsley.

Regular buses service the surrounding area and provide access to the centre of Sittingbourne. The Kemsley Railway Station, located 2km west of the sites provides some direct services to London Victoria, with more frequent trains to London available by changing at Sittingbourne.

K3

In practical terms the construction of K3 is substantially complete, with construction having commenced in July 2016. At its peak there was a workforce on the K3 site of some 642 people, with the peak construction period generating a maximum of 60 HGV deliveries a day. With the bulk of facility now complete the levels of construction activity have dropped from that peak period.

Under the terms of its existing planning permission K3 has consent for 348 HGV/RCV deliveries per day. The facility is expected to operate with 49 staff, who would work between 0900 and 1700 on a three shift system.

No additional staff would be required as a result of the practical effect of the K3 proposed development. The additional 107,000 tonnes of waste which would be processed under the practical effect of the K3 proposed development would generate a further 68 HGV/RCV movements per day, giving a total of up to 416 HGV/RCV movements per day.

WKN

WKN is a single line facility and would therefore be smaller than K3. The Transport Assessment submitted to accompany the application [Document 3.1 - Appendix 4.1) estimates on that basis that at the peak of the WKN construction some 45 HGV deliveries would be required per day and that there would be a maximum workforce of 482 staff (with those figures based on a level of activity which is 75% of what was required on the K3 site). Construction of WKN is anticipated to take around 40 months.

There is expected to be a number of abnormal and indivisible loads required to deliver large items of plant in connection with the construction of the WKN Proposed Development. The escort and management requirements will be agreed with the highway authorities as part of obtaining permission to enable their movement on the highway via the Motor Vehicles (Authorisation of Special Use) General Order (HMSO,2003).

The completed WKN facility would require between 45 to 49 staff, given there is the potential for K3 and WKN to share some staff. All assessments within the application are based on 49 staff being required for robustness. WKN would be capable of processing up to 390,000 tonnes of waste each year, which would require up to 125 HGV deliveries per day.

K3 and WKN Site Layouts

When operational both the K3 and WKN facilities would be accessed by road via an existing access which runs from Barge Way along the eastern edge of the Kemsley Paper Mill site. Barge Way in turn accesses Swale Way which then provides access to the A249 via the Grovehurst junction.

In each case an internal road network is then provided within the K3 and would be provided within the WKN sites which would provide for waste delivery HGV's and RCV's to pass through an entrance gatehouse and then to proceed to the tipping hall before then exiting the site. The same access is used for providing access to the car parking areas to be installed within the K3 site and proposed within the WKN site.

In the case of K3 construction traffic has used the same access road to access the K3 laydown area. WKN construction traffic would use a combination of the main access road, together with the Jetty Road which runs to the south of the DS Smith Anaerobic Digester and which is used by Knauf to access their gypsum delivery jetty to the north of the WKN site. It is envisaged that improvements would be made to that access where necessary, for example to provide passing places.

Requirements

The original K3 planning permission contained a condition which required consideration to be given to the transportation of waste to the site by rail. It was envisaged that a historic branch of the railway to the north of the Kemsley station could have been developed, together with a railhead within the Ridham Dock in order for waste to be transported to the K3 facility by rail. However the cancelling of the North London Waste Authority contract, and the inability to viably or feasibly deliver waste to the site by rail at present, due to the nature of the waste contracts being secured to serve K3, means that the condition was discharged with a Rail Strategy which proposed to undertake regular reviews of the ability to transfer waste by rail.

The DCO application is accompanied by two Rail and Water Transportation Strategies, addressing the K3 and WKN sites separately. Those reports assess the ability to deliver waste to the K3 and WKN facilities by either rail and/or water, and draw the same conclusions as found previously in terms of the viability and feasibility of those methods at present. The environmental assessments undertaken to support the current application therefore take the position that all waste for K3 and WKN would be delivered the site by road. However provision is made within each strategy for a five yearly review of the ability to deliver waste to sites by other methods.

Requirement 23 of the dDCO requires a detailed Construction Traffic Management Plan to be produced and agreed with the relevant planning authority prior to the commencement of the WKN Proposed Development. The CTMP would include details on the number, size and type of vehicles which would be accessing the site, a defined access route, access and vehicle waiting details, details of wheel washing and monitoring, co-ordinating and control measures.

Requirement 24 of the dDCO requires an operational traffic routing and management plan for WKN to be agreed with the relevant planning authority, and Requirement 25 requires a Travel Plan for operational staff to be produced and agreed, to set out measures to promote the use of sustainable transport modes to and from the WKN facility.

1. This Design and Access Statement focuses on the design rationale, access and sustainability elements of the K3 and WKN proposed developments.
2. K3 is substantially constructed under the terms of a planning permission granted by Kent County Council in 2012. When complete and operational, which is expected to be in late 2019, K3 will have a generating capacity of up to 49.9MW and an annual throughput of up to 550,000 tonnes of waste. WTI have identified the ability for K3 to generate an additional 25.1MW of electricity, through internal upgrading and efficiencies, and for K3 to be able to process an additional 107,000 tonnes of waste per annum due to an anticipated increased operational uptime of the facility per annum.
3. Whilst that reflects the practical effect of the proposed DCO, and would not involve any external changes to K3 as currently being constructed, in order to properly categorise and consent the K3 project under the Planning Act 2008 development consent is sought for the construction and operation of the K3 waste-to-energy facility, with a generating capacity of up to 75MW and an annual waste throughput of up to 657,000 tonnes. The generating capacity of K3 means that it is a Nationally Significant Infrastructure project and that as such a Development Consent Order is required.
4. WKN would be a new, separate single line waste-to-energy facility constructed on land adjacent to K3 which is currently being used as the K3 laydown area. WKN would have a generation capacity of up to 42MW and would be able to process up to 390,000 tonnes of waste per annum. It is not therefore an NSIP, as its generating capacity is below 50MW, but the SoS has directed that it is nationally significant and is to be treated as a development for which development consent is required.
5. This Statement documents the approach taken to the design of K3. The layout and design of K3 would not alter as a result of development consent being granted. The layout of K3 reflects the waste-to-energy project, which has largely dictated the arrangement of key buildings around the K3 site. Rather than providing the individual elements of K3 within a larger structure, a conscious decision was taken for individual building elements to be constructed, with visual cohesion provided through the use of a graduated colour scheme which draws on the dark red and brown colours which are typical of the surrounding area, and which then uses neutral colours at higher levels to reduce the visual mass of the K3 facility.
6. The layout and design of the WKN facility will not be finalised until contractors and equipment suppliers are appointed, should development consent be granted. A set of worst case scenario design parameters have therefore been used to provide a set of building envelopes which provides an appropriate level of flexibility for the final design whilst allowing a worst case scenario to be assessed in environmental impact terms. The layout of WKN established by the parameters responds to the scale and irregular size of the WKN site together with the surrounding context of the Swale Estuary and the adjacent K3 facility. The final design of the WKN facility would be agreed with the relevant planning authority under Requirement 13 of the dDCO and would allow for an external design which is similar to that used on K3 or a different approach to be taken.
7. The landscape and visual impact of the K3 and WKN facilities is reduced by their context within a heavily industrialised landscape. The K3 approved design already seeks to reduce its visual impact, and the final design of the WKN facility, should development consent be granted, would also ensure it provides an appropriate response to the landscape and visual context of the site.
8. Both the K3 and WKN proposed developments are able to generate sustainability benefits through their processing of waste and their production

of energy for export to the distribution network and steam for export to the Kemsley Paper mill or other customers. The K3 and WKN facilities also provide a significant source of construction jobs as well as then providing a source of permanent employment. The use of Employment Strategies ensure that the benefits of construction and operation are felt at the local level.

9. Both the K3 and WKN sites benefit from good vehicular access to the primary road network and are also accessible via alternative methods of travel. The layout of the K3 and WKN sites ensures the safe and logical movement of waste delivery vehicles around the two facilities, whilst the Rail and Water Transportation Strategies ensure the potential of delivering waste via alternative methods will continue to be reviewed.
10. Overall it is therefore submitted that the K3 and WKN proposed developments are appropriate and policy compliant in respect of design, access and sustainability.