

## 3 Methodology

### 3.1 Introduction

3.1.1 This Chapter explains the process taken to identify the environmental issues considered by this ES and outlines the overall approach taken to the EIA. Specific methodologies for each of the specialist studies are given in the relevant topic chapters.

### 3.2 The scope of the EIA

3.2.1 Scoping is the identification of the range of potentially significant issues likely to arise as a result of a proposed development. The advice given in the DCLG EIA guidance<sup>1</sup> (under the heading “What Information should the Environmental Statement contain”) is that:

*“Whilst every Environmental Statement should provide a full factual description of the development, the emphasis of Schedule 4 is on the “main” or “significant” environmental effects to which a development is likely to give rise. The Environmental Statement should be proportionate and not be any longer than is necessary to assess properly those effects. Where, for example, only one environmental factor is likely to be significantly affected, the assessment should focus on that issue only. Impacts which have little or no significance for the particular development in question will need only very brief treatment to indicate that their possible relevance has been considered.”*

<http://planningguidance.planningportal.gov.uk/> Paragraph: 033 Reference ID: 4-035-20170728

3.2.2 This approach is reinforced by case law. Judgments have stated that, even in relation to the minimum requirements for an ES, not every possible effect has to be considered. The focus should be on the main effects and on remedying the significant adverse effects. The *Milne* judgment states that, “the Environmental Statement does not have to describe every environmental effect, however minor, but only the main effects or likely significant effects”.<sup>2</sup> The *Tew* judgment noted that the underlying objective of EIA is that decisions be taken “in full knowledge” of a project’s likely significant effects and stated: <sup>3</sup>

*“...that is not to suggest that full knowledge requires an environmental statement to contain every conceivable scrap of environmental information about a particular project. The directive and the Assessment Regulations*

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<sup>1</sup> Whilst it is noted that the DCLG EIA Planning Practice Guidance relates principally to the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 the principle and purpose of EIA under the DCO process remains the same.

<sup>2</sup> R v Rochdale MBC ex parte Milne [2001] 81 PCR 27

<sup>3</sup> R v Rochdale MBC ex parte Tew [1999] 3 PLR 74

*require likely significant effects to be assessed. It will be for the local planning authority to decide whether a particular effect is significant”.*

- 3.2.3 The purpose of scoping is therefore to ‘scope in’ only those aspects considered to have likely significant environmental effects. Where a particular environmental feature, or component of it, has not been included within the proposed scope of the EIA, this is not to suggest that there will be no associated effects; rather that these are not considered to be among the potentially significant effects.
- 3.2.4 DHA working with RPS, undertook a scoping exercise and produced an EIA Scoping Report in July 2018. This document provided a summary of the changes sought to K3 and the WKN Proposed Development, identified the main environmental effects to be assessed within the EIA and scoped out issues that did not require consideration but were to be kept under review throughout the EIA process ensuring that any new potentially significant effects identified were included.
- 3.2.5 In accordance with the Infrastructure Planning (EIA) Regulations 2017 (the “EIA Regulations”) the following factors influenced the breadth of the scoping exercise and so the EIA:
- The specific characteristics of the K3 and WKN Proposed Developments;
  - The environmental features likely to be affected by the K3 and WKN Proposed Developments;
  - The extent of any likely impact;
  - The trans frontier nature of the impact;
  - The magnitude and complexity of the impact;
  - The probability of the impact;
  - The duration, frequency and reversibility of the impact.
- 3.2.6 A formal request for a Scoping Opinion was made to PINS in August 2018. PINS, in accordance with the EIA Regulations consulted a number of statutory and non-statutory bodies on the proposed scope of the EIA. **Table 3.1** provides a list of the statutory and non-statutory bodies consulted by PINS.

The Health and Safety Executive*
NHS England
Swale Clinical Commissioning Group
Natural England*
Historic England
Kent Fire and Rescue Service
Kent Police and Crime Commissioner
The Environment Agency*
Maritime and Coastguard Agency*
The Marine Management Organisation*
Civil Aviation Authority

Kent County Council Highways Authority
Highways England*
Trinity House*
Public Health England*
The Crown Estate
Forestry Commission
Ministry of Defence
Network Rail Infrastructure Ltd
Highways England Historical Railways
South East Coast Ambulance Service NHS Foundation Trust
NATS En-Route Safeguarding*
Royal Mail Group*
Homes England
Southern Water
Cadent Gas Limited
Energetics Gas Limited
Energy Assets Pipelines Limited
ES Pipelines Ltd*
ESP Connections Ltd*
ESP Networks Ltd
ESP Pipelines Ltd
Fulcrum Pipelines Limited
GTC Pipelines Limited
Independent Pipelines Limited
Indigo Pipelines Limited
Quadrant Pipelines Limited
National Grid Gas Plc*
Scotland Gas Networks Plc
Southern Gas Networks Plc
Wales and West Utilities Ltd
Energetics Electricity Limited
Energy Assets Networks Limited
Energy Assets Power Networks Limited
ESP Electricity Limited
Fulcrum Electricity Assets Limited
G2 Energy IDNO Limited
Harlaxton Energy Networks Limited
Independent Power Networks Limited
Leep Electricity Networks Limited
Murphy Power Distribution Limited
The Electricity Network Company Limited
UK Power Distribution Limited
Utility Assets Limited
Vattenfall Networks Limited
Utility Distribution Networks Limited
UK Power Networks Limited

National Grid Electricity Transmission Plc*
Swale Borough Council*
Medway Council*
Ashford Borough Council
Canterbury City Council*
Maidstone Borough Council
Thurrock Council
Kent County Council*
East Sussex County Council
Surrey County Council
London Borough of Bexley*
London Borough of Bromley
Royal National Lifeboat Institution
<b>*consultation bodies who replied.</b>

Table 3.1: Organisations consulted by PINS on the scope of the EIA.

- 3.2.7 A copy of the EIA Scoping Report issued to PINS can be found in **Appendix 3.1** and a copy of PINS formal Scoping Opinion pursuant to this including statutory consultee responses is provided as **Appendix 3.2**.
- 3.2.8 In addition to the above individual topic authors have approached consultees directly to agree the methodology and scope of the assessments where necessary and this is reported in topic chapters as relevant.
- 3.2.9 It should be noted that at the time of scoping the intention was to apply for an extension to K3 as consented to comprise a power upgrade from 49.9MW to 75MW and an increase in annual permissible waste throughput of 107,000tpa.
- 3.2.10 In order for the K3 project to be properly categorised and consented under the Planning Act 2008 the applicant is seeking consent for the construction of K3 at its total generating capacity of 75MW (49.9MW consented + 25.1MW upgrade) together with its proposed tonnage throughput of 657,000 tonnes per annum (550,000 consented + 107,000 tonnage increase) (the 'K3 Proposed Development').
- 3.2.11 However, the practical effect of the K3 Proposed Development would simply allow K3 as consented to generate an additional 25.1MW and process an additional 107,000 tpa of waste i.e. the same effect of proposed development at the time of scoping.
- 3.2.12 Construction of K3 began in July 2016 and is expected to be completed with the facility operational by late 2019. The DCO being consent sought would not result in any additional external physical changes to K3 as consented and the layout and appearance of the facility would remain as per its consented design.
- 3.2.13 It is therefore considered that the Scoping Report and the subsequent Scoping Opinion issued by PINS remains relevant to the practical effect of the DCO. However, in order to ensure that the effect of the development as whole is

assessed appropriately within the ES some amendments to the scope of the ES have been made. These are set out where relevant herein.

### **3.3 Key issues identified in scoping**

- 3.3.1 Responses were received from nineteen of the organisations consulted (as identified in Table 3.1)
- 3.3.2 The Scope of the ES has been amended to take note of the issues raised during the scoping process. **Appendix 3.3** provides a summary table identifying where each of the issues identified during scoping are addressed within the ES or provides justification as to why these issues can subsequently be scoped out of the ES.
- 3.3.3 Where a particular environmental feature, or component of it, has not been included within the ES, this is not to suggest that there will be no associated effects; rather that these are not considered to be among the potentially significant effects.

### **3.4 Section 42 Consultation and Section 48 Publicity**

- 3.4.1 The approach taken by the Applicant to pre-application consultation and publicity is explained in full in the Consultation Report [Document 4.1] which forms part of the DCO application.
- 3.4.2 Section 42 of the Planning Act 2008 requires the applicant to consult various prescribed bodies, directly affected and adjoining local authorities, the Greater London Authority where relevant and any parties identified under S44, such as owner, lessees, tenants or occupiers and others.
- 3.4.3 Section 48 of the same Act requires the applicant to publicise the proposed application in the prescribed manner.
- 3.4.4 Three rounds of Section 42 consultation, S47 (local community) consultation and Section 48 publicity have now been undertaken.

#### **2017**

- 3.4.5 The first round of consultation and publicity took place in 2017, prior to the construction of K3 having been commenced. At that stage the proposal on which consultation and publicity was undertaken comprised the construction and operation of K3 to an upgraded generating capacity of 75MW. The proposals at that time did not include any tonnage throughput capacity increase, or the proposed WKN facility.

#### **2018**

- 3.4.6 The second round of consultation and publicity took place in 2018, by which point the construction of K3 was advanced. As K3 was being constructed the consultation and publicity sought views regarding a power upgrade of K3 from 49.9MW to 75MW. By that stage the applicant had reviewed the potential waste

throughput of the K3 facility and views were also sought regarding an increase to the annual permissible waste throughput of 107,000 tonnes, resulting in a total proposed annual tonnage throughput of 657,000 tonnes. The consultation made clear that no construction works were necessary for that upgrade or tonnage throughput increase. The consultation and publicity also included the construction and operation of the WKN facility on the land adjacent to K3.

- 3.4.7 Section 42 consultation packs were sent to the required parties from the 30<sup>th</sup> November 2018. A draft ES was produced pursuant to the EIA Scoping process and formed the basis on which the S42 Consultation was undertaken. A copy of the consultation letter with a link to the relevant documents on the Applicants website is provided in **Technical Appendix 3.4**.
- 3.4.8 Statutory notices under Section 48 were placed in locally circulating newspapers on the 28<sup>th</sup> November, 3<sup>rd</sup> December, 5<sup>th</sup> December and 10<sup>th</sup> December 2018, the London Gazette on the 4<sup>th</sup> December 2018 and the Daily Telegraph on the 5<sup>th</sup> December 2018.
- 3.4.9 Responses were received from 22 of the organisations consulted under Section 42 (as identified in Table 3.2). No responses were received as a result of the Section 48 notices.
- 3.4.10 The Scope of the ES has been amended where relevant to take note of the issues raised during the S42 consultation process. **Technical Appendix 3.5** provides a summary table identifying where each of the issues identified during the S42 consultation are addressed within the ES or provides justification as to why these issues can subsequently be scoped out of the ES.

Health and Safety Executive*
NHS England
NHS Swale Clinical Commissioning Group
Natural England*
Historic England*
Kent Fire and Rescue Service
Kent Police and Crime Commissioner
Bapchild Parish Council
Bobbing Parish Council
Borden Parish Council
Iwade Parish Council
Minster-on-Sea Parish Council*
Rodmersham Parish Council
Tonge Parish Council
Tunstall Parish Council
Environment Agency*
Maritime and Coastguard Agency
Marine Management Organisation*
Civil Aviation Authority
Kent County Council Highways
Highways England*
Lower Medway IDB

Trinity House*
Public Health England
The Crown Estate
Forestry Commission
Ministry of Defence
Royal National Lifeboat Institution
South East Coast Ambulance Service NHS Foundation Trust
Highways England Historical Railways Estate
Network Rail Infrastructure Limited*
NATS En-route (NERL) Safeguarding*
Royal Mail Group*
Homes England
Southern Water*
Thames Water Utilities Limited
Cadent Gas Limited
Energetics Gas Limited
Energy Assets Pipelines Limited
ES Pipelines Ltd
ESP Connections Ltd*
ESP Networks Ltd*
ESP Pipelines Ltd*
Fulcrum Pipelines Ltd
GTC Pipelines Ltd
Independent Pipelines Ltd
Indigo Pipelines Ltd
Quadrant Pipelines Limited
National Grid Gas Plc
Scotland Gas Networks Plc
Southern Gas Networks Plc
Wales and West Utilities Ltd
Energetics Electricity Limited
Energy Assets Network Limited
Energy Assets Power Networks
ESP Electricity Limited*
Fulcrum Electricity Assets Limited
G2 Energy IDNO Limited
Harlaxton Energy Networks Limited*
Independent Power Networks Limited
Leep Electricity Networks Limited
Murphy Power Distribution Limited
The Electricity Network Company Limited
UK Power Distribution Limited
Utility Assets Limited
Utility Distribution Networks Limited
UK Power Networks Limited
Vattenfall Networks Limited

National Grid Electricity Transmission PLC
British Telecommunications Plc
EE Limited
Virgin Media Communications Limited
O2 Limited
Cornerstone Telecommunications Infrastructure Limited
Swale Borough Council
Medway Council*
Ashford Borough Council
Canterbury City Council*
Maidstone Borough Council
Thurrock Council
Kent County Council*
East Sussex County Council
Surrey County Council*
London Borough of Bexley
London Borough of Bromley
<b>*consultation bodies who replied.</b>
<b>Excludes Section 44 consultees – owner, lessee, tenant, occupier</b>

Table 3.1: Organisations consulted as part of S42 Consultation on the scope of the EIA November 2018

## 2019

- 3.4.11 In order to properly categorise and consent the development under the Planning Act 2008 consent is now being sought for the construction and operation of K3 up to a generating capacity of 75MW, as well as seeking consent for an annual throughput of 657,000 tonnes of waste.
- 3.4.12 A further round of S42 and S47 consultation and S48 publicity was therefore undertaken in July 2019 on the description of development as it is now set out within the application, i.e. the construction and operation of a 75MW generating station with a total annual throughput of 657,000tpa, together with the construction and operation of the WKN facility. The intention of the third round of consultation and publicity was to inform interested stakeholders about the change to the description of development and to clarify the effect of that on the approach to EIA within the application, in order to allow them the opportunity to comment on the application in those terms prior to submission.
- 3.4.13 A PEIR was produced pursuant to the EIA Scoping process and formed the basis on which the S42 Consultation was undertaken. A copy of the consultation letter with a link to the relevant documents on the Applicants website is provided in Technical Appendix 3.6.
- 3.4.14 Statutory notices under Section 48 were placed in locally circulating newspapers on the 24<sup>th</sup>, 29<sup>th</sup> and 31<sup>st</sup> July 2019 and 5<sup>th</sup> and 12<sup>th</sup> August 2019, the London Gazette online 30<sup>th</sup> July 2019 and in the paper 31<sup>st</sup> July 2019 and the Daily Telegraph on the 31<sup>st</sup> July 2019.



- 3.4.15 Responses were received from 20 of the organisations consulted under Section 42 (as identified in Table 3.3). One Section 48 response was received but was unrelated to the ES.
- 3.4.16 The Scope of the ES has been amended where relevant to take note of the issues raised during the S42 consultation process. Technical Appendix 3.7 provides a summary table identifying where each of the issues identified during the S42 consultation are addressed within the ES or provides justification as to why these issues can subsequently be scoped out of the ES.

Health and Safety Executive*
NHS England
NHS Swale Clinical Commissioning Group
Natural England*
Historic England*
Kent Fire and Rescue Service
Kent Police and Crime Commissioner
Bapchild Parish Council
Bobbing Parish Council*
Borden Parish Council
Iwade Parish Council
Minster-on-Sea Parish Council*
Rodmersham Parish Council
Tonge Parish Council
Tunstall Parish Council
Environment Agency*
Maritime and Coastguard Agency
Marine Management Organisation
Civil Aviation Authority
Kent County Council Highways*
Highways England
Lower Medway IDB
Trinity House*
Public Health England
The Crown Estate
Forestry Commission
Ministry of Defence
Royal National Lifeboat Institution
South East Coast Ambulance Service NHS Foundation Trust
Highways England Historical Railways Estate
Network Rail Infrastructure Limited*
NATS En-route (NERL) Safeguarding*
Royal Mail Group*
Homes England
Southern Water
Thames Water Utilities Limited
Cadent Gas Limited
Energetics Gas Limited

Energy Assets Pipelines Limited
ES Pipelines Ltd
ESP Connections Ltd
ESP Networks Ltd
ESP Pipelines Ltd
Fulcrum Pipelines Ltd
GTC Pipelines Ltd
Independent Pipelines Ltd
Indigo Pipelines Ltd*
Quadrant Pipelines Limited
National Grid Gas Plc*
Scotland Gas Networks Plc
Southern Gas Networks Plc*
Wales and West Utilities Ltd
Energetics Electricity Limited
Energy Assets Network Limited
Energy Assets Power Networks
ESP Electricity Limited*
Fulcrum Electricity Assets Limited
G2 Energy IDNO Limited
Harlaxton Energy Networks Limited*
Independent Power Networks Limited
Leep Electricity Networks Limited
Murphy Power Distribution Limited
The Electricity Network Company Limited
UK Power Distribution Limited
Utility Assets Limited
Utility Distribution Networks Limited
UK Power Networks Limited
Vattenfall Networks Limited
National Grid Electricity Transmission PLC*
British Telecommunications Plc
EE Limited
Virgin Media Communications Limited
O2 Limited
Cornerstone Telecommunications Infrastructure Limited
Swale Borough Council*
Medway Council*
Ashford Borough Council
Canterbury City Council*
Maidstone Borough Council
Thurrock Council
Kent County Council
East Sussex County Council
Surrey County Council
London Borough of Bexley*

London Borough of Bromley
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<b>*consultation bodies who replied.</b>
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<b>Excludes Section 44 consultees – owner, lessee, tenant, occupier</b>
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Table 3.2: Organisations consulted as part of S42 Consultation on the scope of the EIA July 2019

### 3.5 EIA assessment methodology – general approach

- 3.5.1 An environmental effect is an alteration, positive or negative, to some aspect of the environment (sensitive receptors<sup>4</sup>) that occur as a result of a proposed development.
- 3.5.2 The project team has considered the likely positive and negative significant environmental effects of the K3 and WKN Proposed Developments. These effects are reported in this ES, taking into account current knowledge of the Site(s) and their surroundings (baseline), and drawing upon the findings of a variety of studies which have all contributed to the EIA process.
- 3.5.3 It is important that the assessment methodology distinguishes between the sensitivity of the receptor and the type and size of change that will affect the receptor, either directly or indirectly. Where significant effects have been identified, the relevant Technical Chapter also proposes mitigation measures (i.e. ways of avoiding, limiting or offsetting potentially significant effects) where possible.
- 3.5.4 This ES has been produced following published guidance, information on best practice and PINS advice notes 7, 9 and 17. The methodologies used for the specific topics are discussed in the relevant chapters of the ES.

#### ***K3 Proposed Development***

- 3.5.5 The ES has assessed the likely positive and negative significant environmental effects of the K3 Proposed Development.

#### ***Construction of K3***

- 3.5.6 The application for the K3 Proposed Development in accordance with the Planning Act 2008 seeks Development Consent for the construction and operation of the Wheelabrator Kemsley Generating Station ('K3') with a 75MW generating capacity and 657,000tpa waste throughput. However, the practical effect of the DCO application is to permit K3 as consented and constructed to operate at an upgraded capacity of up to 75MW (an additional 25.1 MWe) and to process an additional 107,000 tonnes of waste per annum beyond that possible under its existing Town and Country Planning permission
- 3.5.7 Construction of K3 began in July 2016 and is expected to be completed with the facility operational by late 2019. The DCO being consent sought would not result

<sup>4</sup> A receptor is a part of the natural or man-made environment, such as a river, woodland, protected species, a person or a building, that is affected by an impact.

in any additional external physical changes to K3 as consented and the layout and appearance of the facility would remain as per its consented design.

- 3.5.8 The effects of the construction of K3 were fully assessed as part of Environmental Impact Assessment undertaken, submitted and approved as part of existing planning consent (as amended) (this is provided as Document 3.3 submitted with the application). There will be no physical additional construction works to K3. The physical elements of the facility will remain as consented.
- 3.5.9 No further assessment of the effects of constructing K3 has therefore been undertaken except where potential effects pursuant to the EIA Regulations 2017 were not assessed as part of the existing planning permission i.e. human health and climate change.

#### ***The operation of the K3 Facility***

- 3.5.10 The assessment of the operation of the K3 Proposed Development is assessed in two parts;
- The K3 Proposed Development assuming the absence of the operation of K3 as consented i.e. the effect of a 75MW Generating Station processing 657,000tpa per annum of waste.
  - The practical effect of the K3 Proposed Development which is K3 as consented (forming the baseline) and the effect of an additional 25.1 MWe generating capacity and the processing an additional 107,000 tonnes of waste per annum.
- 3.5.11 The presentation of the practical effect of the K3 Proposed Development is deemed relevant as it will be the effect of the application in real terms if consented.
- 3.5.12 The ES also considers and potential effects of decommissioning of the K3 Proposed Development at a future date.

#### ***WKN Proposed Development***

- 3.5.13 The ES has considered the likely positive and negative significant environmental effects during the construction of the WKN Proposed Development, once the development is operational, and the potential effects of decommissioning of the plant at a future date.
- 3.5.14 For the assessment of the WKN Proposed Development the baseline for the assessments is K3 as consented; as it is substantially constructed and capable of being operated under its existing permission there is not a scenario where the WKN Proposed Development would be present without K3.
- 3.5.15 The effect of the K3 and WKN Proposed Developments in combination is addressed as part of the cumulative effects assessments for each topic. In a wider

context there are a number of cumulative developments within the zone of influence of the K3 and WKN Sites, a significant number of which have planning permission (see section 3.8).

- 3.5.16 Where a different approach has been taken to that set out above this is expressly stated and justified within the relevant topic chapters.

### 3.6 Determining the significance of effects in the ES

3.6.1 The purpose of the ES is to identify the positive and negative environmental effects of a scheme, including an assessment of the degree to which such effects are likely to be significant. The evaluation of the significance of an effect is fundamental to the EIA process. The degree of an effect i.e. significant or not-significant determines the resources that should be deployed in avoiding or mitigating an adverse effect. Conversely it identifies the degree of value of a beneficial effect.

3.6.2 The degree of an effect is determined by the interaction of two factors: (i) the magnitude, scale, severity or probability of an impact or change, and (ii) the value, importance or sensitivity of the resource being affected. This is then used to determine whether an effect is significant or not. **Figure 3.1** shows the general matrix<sup>5</sup> used to determine the degree of each effect identified and whether an effect is significant. Typically if the effect is moderate or above then the effect is considered to be significant i.e. it is likely to be a material factor in the decision whether to grant consent. Slight or negligible effects are not considered to be significant. Where any topic specific methodologies differ from this approach these are explained in the relevant topic chapters.

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<sup>5</sup> Adapted from figure 6.3 of the Institute of Environmental Assessment and Management's State of Environmental Impact Assessment Practice in the UK 2011.

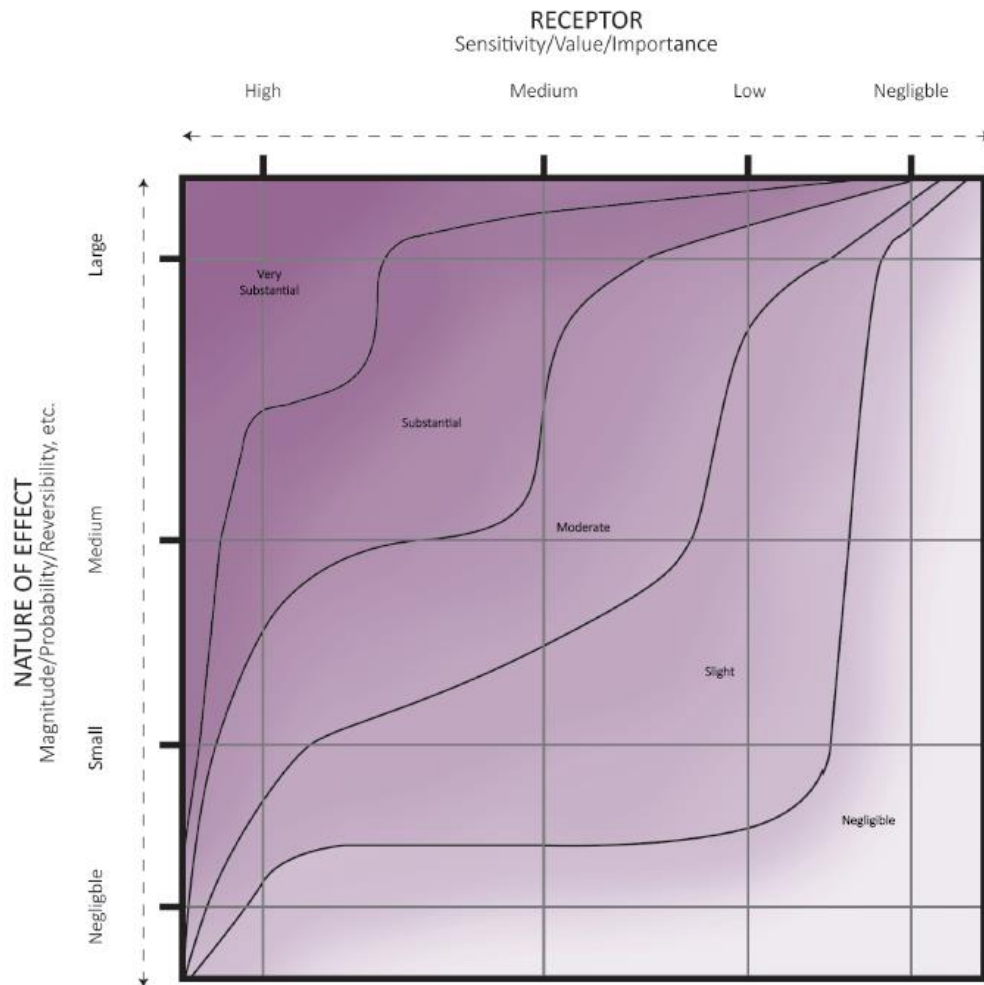


Figure 3.1: Significance matrix

3.6.3 As a general rule significance is determined taking into account a variety of factors. These include:

- the value of the resource (e.g. whether it is of international, national, regional and local level importance);
- the magnitude of the impact;
- the duration involved;
- the reversibility of the effect; and
- the number and sensitivity of receptors.

3.6.4 As far as possible, standard words have been used to define degrees of effect (i.e. "very substantial", "substantial", "moderate", "slight" and "negligible"), but not so rigorously as to remove the flexibility of professional judgement. It is noted that a number of topics e.g. air quality and ecology have their own individual requirements and professional body guidance with regard to impact classification

and degree of significance. Therefore, in accordance with best practice guidance, significance has been determined on the basis of expert judgement and industry specific guidelines. To ensure that the manner in which significance has been attributed is transparent and repeatable, the aforementioned standard words are used where feasible to define the degrees of effect.

3.6.5 Although the environmental effects described in the ES are under discrete headings, the EIA has paid close attention to the interrelationships between the topic areas in order to assemble a holistic picture of the likely significant effects and mitigation measures.

3.6.6 Table 3.2 below shows the topic areas that are likely to impact upon other topic areas and result in intra-project effects that could be significant. To this regard topic authors have co-ordinated their assessments where relevant to address potential intra-project effects e.g. the effects of construction noise on ecological receptors. Cross references between assessments are made where appropriate.

		Affected By									
		Traffic and Transport	Air Quality	Climate Change	Noise and Vibration	Human health	Ground Conditions	Water Environment	Biodiversity	Landscape and visual impacts	Cultural heritage
Impacted on	Traffic and transport										
	Air Quality	X									
	Climate Change	X	X								
	Noise and Vibration	X									
	Human health	X									
	Ground conditions										
	Water Environment			X			X				
	Biodiversity		X	X	X		X	X			
	Landscape and visual impacts		X <sup>6</sup>								X
	Cultural heritage				X					X	

<sup>6</sup> Achieving sufficient emission dispersal and consequently acceptable emission levels is a determining factor in stipulating stack height which turn affects visual impact.

### 3.7 Identification of mitigation measures and significant residual effects

3.7.1 Where appropriate, the identification of significant effects has helped to guide the mitigation measures proposed. The effects of the K3 and WKN Proposed Developments with the proposed mitigation in place are then reassessed to determine the significance of effect post mitigation. At the end of each environmental assessment, where relevant, there is a residual effects table, which summarises any likely significant environmental effects remaining after mitigation. Any significant effects remaining after mitigation or which cannot be mitigated are reported appropriately within the Technical Chapter and a summary of all significant residual effects provided in Chapter 14.

### 3.8 Cumulative effects

3.8.1 The effects of the K3 and WKN Proposed Development in combination with other schemes that are operational / constructed, consented or for which planning permissions are currently being sought, has been assessed within the EIA where appropriate.

3.8.2 With regard to cumulative effects the ES has assessed the following scenarios as relevant:

- Baseline + K3 Proposed Development + other relevant cumulative developments within the zone of influence of the K3 Proposed Development
- K3 as consented + the practical effect of the K3 Proposed Development + WKN Proposed Development + other relevant cumulative developments within the zone of influence of the K3 Proposed Development
- Baseline + K3 Proposed Development + WKN Proposed Development + other relevant cumulative developments within the zone of influence of the K3 and WKN Proposed Developments
- K3 as consented + the practical effect of the K3 Proposed Development + WKN Proposed Development + other relevant cumulative developments within the zone of influence of the K3 and WKN Proposed Developments
- K3 as consented + WKN Proposed Development + other relevant cumulative developments within the zone of influence of the WKN Proposed Developments

3.8.3 Cumulative effects will be considered on an issue-by-issue basis and the scope of the EIA will be expanded, if necessary, to include any cumulative issues that arise in the future. The cumulative effects of other developments will be considered only where sufficient information is available, i.e. when a project is within the planning domain and there is adequate information publicly available.

3.8.4 All large-scale development within 3km of the Site(s) and all large energy, industrial and mixed-use schemes for the purposes of the air quality and landscape

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and visual impacts (i.e. of a similar type to the K3 and WKN Proposed Developments and therefore most likely to result in significant effects) within 10km of the site(s) have been identified for assessment in the ES. A total of 46 cumulative sites have been considered for their potential cumulative effects (see **Figures 3.2a&b**):

1. SW/11/1291 Anaerobic digester and associated ground profiling and landscaping.
2. SW/14/0224 Solar farm, comprising the erection of solar arrays of photovoltaic panels, inverter and transformer sheds, fencing, site storage cabin, combined DNO and EPC switchgear housing, internal gravel access road, and associated equipment.
3. 14/500327/OUT Up to 8000m<sup>2</sup> of Class B1 and B2 floor space and all necessary supporting infrastructure including roads, parking, open space, amenity landscaping, biodiversity enhancement and buffer to proposed extension to Milton Creek Country Park. Detailed approval for Phase 1 including (i) vehicular and pedestrian access to Swale Way; (ii) 30 space (approximately) informal car park to serve extension to Milton Creek Country Park; Change of use of approximately 13.31 ha of Kemsley Marshes as an extension to Milton Creek Country Park with footpath connections to the proposed informal car park
4. 14/501181/COUNTY KCC Regulation 13 - Scoping opinion as to the scope of an environmental impact assessment for a proposed combined heat and power plant at Ridham B
5. 15/500348/COUNTY Install advance thermal conversion and energy facility at Kemsley Fields Business Park to produce energy and heat, including construction of new buildings to house thermal conversion and energy generation plant and equipment; construction of associated offices; erection of external plant including storage tanks; and erection of discharge stack (KCC planning application KCC/SW/0010/2015 refers).
6. 15/510589/OUT Outline application for access matters reserved for construction of Business Park (Use Classes B1(B), B1(C), B2 and B8) (research and development, light industrial, general industrial and storage or distribution) (up to a maximum of 46,600sqm), including associated accesses (including alterations to existing northern relief road), parking and servicing areas, landscaping, bunds, surface water storage areas, and related development.
7. 16/501228/FULL Construction of a new baling plant building within an existing waste paper storage yard.
8. 16/501484/COUNTY County matter - The construction and operation of a gypsum recycling building with plant and machinery to recycle plasterboard and the re-configuration of the existing lorry park to include office/welfare facilities and ancillary supporting activities, including rain water harvesting tanks, container storage, new weighbridges, fuel tanks, hardstanding, safe lorry sheeting access platform and automated lorry wash.

9. 16/506193/ENVSCR EIA Screening Opinion - Outline application for proposed residential development of 275 dwellings including affordable housing with open spaces, appropriate landscaping and minor alterations to the surrounding highway network (access).
10. 17/505073/FULL Erection of a tile factory including service yard, storage yard and car parking area.
11. 18/500257/EIFUL Proposed development of 155 dwellings (9 x 2 bed flats, 13 x 2 bed houses, 66 x 3 bed houses, and 67 x 4 bed houses) together with associated new access road, car parking, linear park with acoustic barrier to the A249, dedicated LEAP, allotments, areas of surface water drainage attenuation and ecological enhancement, and new planting, including an area planted in the style of an orchard.
12. 18/500393/FULL Erection of a natural gas fuelled reserve power plant with a maximum export capacity of up to 12MW
13. 15/502197/FULL Extension to existing yard and HGV parking area including installation of 5 no. lighting columns, landscaping, drainage and amendments to existing balancing pond
14. SW/13/1495 Variation of condition 9 of planning permission SW/11/548 (use of building 15B to install and operate materials recycling facility (MRF) and a refuse derived fuel (RDF) facility and to use existing weighbridge, weighbridge office, site office and washroom/toilets to the south of building 15a) to allow an increase of HGV movements from 58 to 98 (49 in and 49 out) for a temporary period of 12 months
15. 18/502489/FULL Construction of a 7.2m wide internal access road and pedestrian footpath, together with the associated removal of existing water holding lagoon, chemical building and works yard. Erection of a new chemical store, works yard and engine store, breaking out and crushing of existing concrete hardstanding, lighting and landscape planting.
16. EN010090 (18/501923/ADJ) Application for an Order Granting Development Consent to decommission the existing K1 CHP on the site and build, commission and operate a new CHP plant.
17. 15/504458/FULL Formation of new rear access road and extension to trailer park to serve Kemsley Paper Mill and ancillary development including attenuation pond, security kiosk and weightbringers
18. 16/506935/COUNTY County Matters application for steam pipeline connecting the Ridham Dock Biomass Facility to the DS Smith Paper Mill.
19. 17/504034/COUNTY County Matter - Provision of a new car park, drainage layout and SUDs pond to accommodate and support the existing waste management facility
20. SW/14/0191 Extension to existing HGV Fitters shed plus small additional storage building.

21. 17/502678/COUNTY Section 73 application to vary conditions 15 and 16 of planning permission SW/12/1184 to permit the facility to operate during a wider range of hours and to also change the number of vehicle movements associated with the operations.
22. 17/505919/COUNTY County Matter: For extension of the existing IBA Recycling Facility by the use of an adjoining building and land; and associated amendments to the layout of the site.
23. 17/502834/FULL Installation of new underground water pipeline via open cut trenching and directional auger boring, including working area and site compounds
24. 14/501588/OUT Outline application for the development of 550-600 houses and all necessary supporting infrastructure including roads, open space, play areas, neighbourhood shopping/ community facilities (up to 650 sq m gross) and landscaping. All detailed matters are reserved for subsequent approval except (i) vehicular access to A2 Fox Hill; (ii) emergency access to Peel Drive; (iii) landscape buffer between housing and countryside gap and (iv) layout, planting, biodiversity enhancement and management of countryside gap, as amended by drawings 5257/OPA/SK001 Rev J (new red line plan), D119/52 (Swanstree Avenue Plan) and D119/53 (junction layout plan).
25. 16/507877/FULL Erection of a residential development comprising 383 dwellings including associated access, parking, public open spaces and landscaping. New vehicular/pedestrian access from Eurolink Way and further secondary vehicular/pedestrian access off Crown Quay Lane. Associated drainage and earthworks.
26. 18/502190/EIHYB Full Planning Application - Phase 1 North - Erection of 91 dwellings accessed from Grovehurst Road, public open and amenity space (including an equipped children's play area) together with associated landscaping and ecological enhancement works, acoustic barrier to the A249, internal access roads, footpaths, cycleways and parking, drainage (including infiltration basins and tanked permeable paving), utilities and service infrastructure works. Full Planning Application - Phase 1 South - Erection of 252 dwellings (including 34 affordable dwellings) accessed from Quinton Road, public open and amenity space, together with associated landscaping and ecological enhancement works, internal access roads, footpaths, cycleways and parking, drainage (including infiltration swales, ring soakaways, and permeable paving), utilities and service infrastructure works. Outline Planning Application - for up to 857 new dwellings (including 10% affordable housing, subject to viability), a site of approximately 10 ha for a secondary and primary school, a mixed use local centre, including land for provision of a convenience store, public open and amenity space (including equipped children's play areas), together with associated landscaping and ecological enhancement works, acoustic barrier to the A249, internal access roads, footpaths, cycleways and parking, drainage (including a foul water pumping station and sustainable drainage

- systems), utilities and service infrastructure. All matters reserved, except for access for the schools site from Grovehurst Road.
27. 18/503873/ENVSCR EIA Screening Opinion Application for housing and country park
  28. 16/507687/COUNTY County matters application for the construction and operation of an Incinerator Bottom Ash (IBA) Recycling Facility on land adjacent to the Kemsley Sustainable Energy Plant
  29. 16/507943/FULL Construction of an agricultural anaerobic digestion plant and associated infrastructure, for the purposes of generating renewable energy.
  30. SW/13/1571 The erection of four wind turbines with a maximum blade tip height of up to 126.5 metres, together with a substation and control building, associated hardstandings, an improved access junction, connecting internal access tracks, and other related infrastructure.
  31. 17/503032/FULL Installation of an electricity battery storage facility within a new steel framed portal building and ancillary infrastructure
  32. 15/506005/COUNTY EIA Screening opinion (County) to determine whether an environmental impact assessment is required for the proposed establishment of a secondary aggregate recycling facility and the reworking of existing aggregate deposits at Rushenden Marshes Disposal Site.
  33. 16/507594/COUNTY County Matter - phased extraction of brickearth, advance planting, access improvements, restoration and replanting back to agricultural use.
  34. 18/503075/NSIP Consultation - Construction and Operation of Photovoltaic (PV) Electricity Generating and Storage.
  35. 15/506166/ENVSCR EIA Screening Opinion - Redevelopment of site, comprising demolition of selected buildings, extension, refurbishment and remodelling of selected buildings and the erection of new buildings to provide up to 88,000sqm, comprising laboratories, offices incubation/innovation hubs; 400sqm of retail and up to 300-400 dwellings.
  36. MC/18/2229 request for a screening opinion as to whether an Environmental Impact Assessment is necessary for the development of a new cement plant.

### **Swale Borough Council Bearing Fruit 2031 Local Plan 2017 Allocations**

- A1 Land allocated for 286,200 sqm of 'B' class employment uses
- A10 Housing allocations for a mix of at least 240 dwellings

- A17 Iwade Expansion
- MU1 North West Sittingbourne - minimum of 1,500 dwellings, community facilities and structural landscaping and open space adjacent the A249.
- MU2 mixed use development comprising 43,000 sq m of 'B' use class employment uses, approximately 106 dwellings, together with 31.1 ha of open space, flooding, biodiversity and landscape enhancements
- A3 Planning permission will be granted for employment uses (use classes B1, B2 or B8 up to 7,500sqm)
- A4 Planning permission will be granted for employment uses on sites north and south of the A249 at Cowstead Corner, as shown on the Proposals Map. The northern site is allocated for an hotel (use class C1), whilst the southern site for use classes B1, B2 or B8 (5,600sqm).
- MU3 Planning permission will be granted for a minimum of 564 dwellings, commercial floorspace (including potential neighbourhood facilities), landscaping and open space on land at south-west Sittingbourne (Borden),
- MU4 Planning permission will be granted for mixed uses comprising approximately 260 dwellings, 26,840 sqm of 'B' use class employment, open space and landscaping
- MU5 Planning permission will be granted for mixed-uses, comprising 1,500 sqm of commercial floorspace, together with some 330 homes and proposals for the conservation, enhancement, and long-term management of the site's ecological and heritage assets

### 3.9 General format of the topic chapters

3.9.1 The ES topic chapters herein address each of the environmental issues identified during the scoping process. Each of the topic chapters is structured in general as follows:

- Introduction;
- Legislation and policy (brief summary only);
- Methodology (including standards, guidance and criteria used in the assessment, and any problems experienced);
- Baseline conditions (including identification of sensitive receptors);
- Effects of the K3 Proposed Development during operation, planned maintenance and in the event of any future decommissioning of the facility;
- Mitigation measures;

- Residual effects;
- Effects of the WKN Proposed Development during construction, operation, planned maintenance and in the event of any future decommissioning of the facility;
- Mitigation measures;
- Residual effects;
- Cumulative effects;
- Summary.

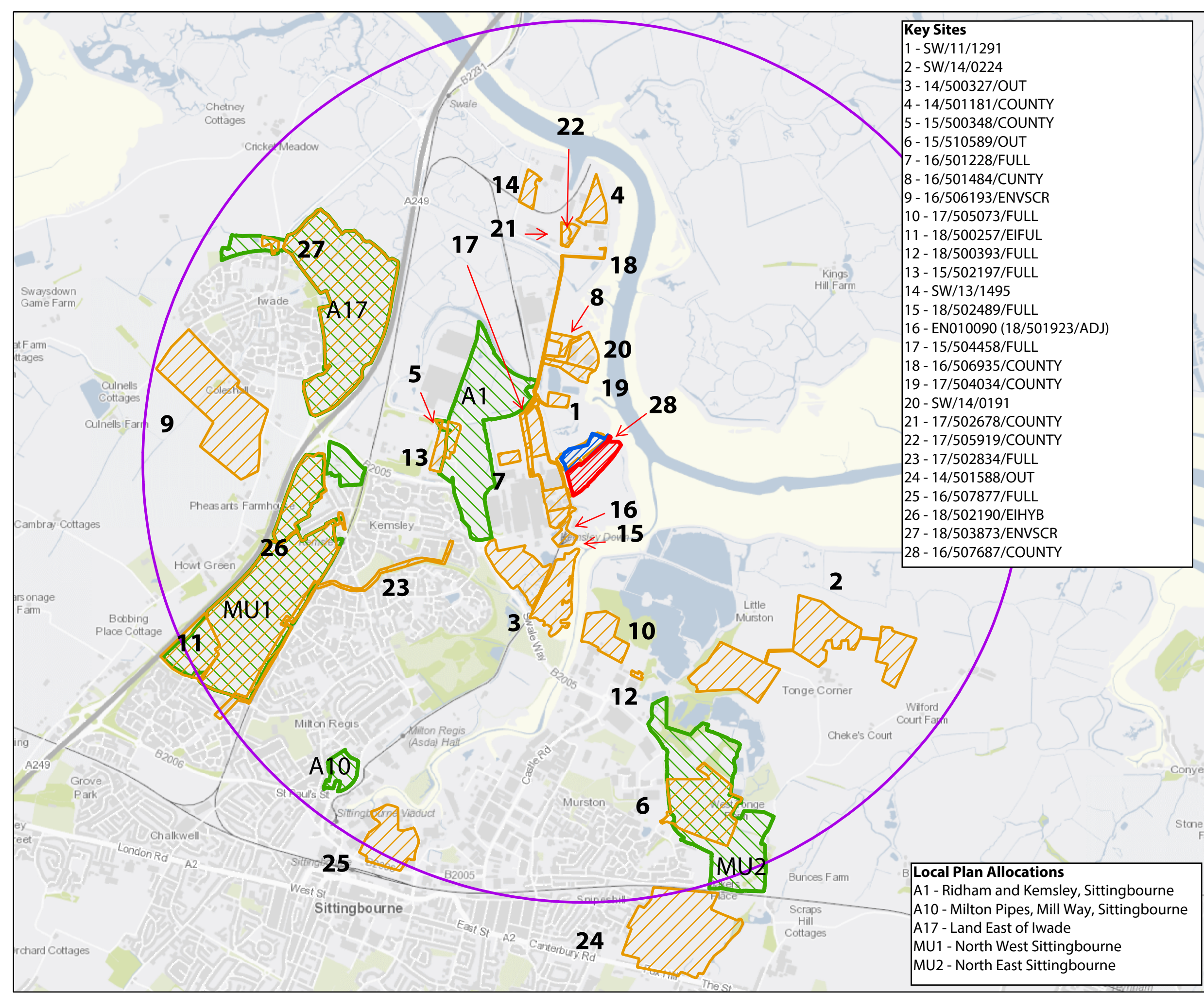
### 3.10 Assumptions and Limitations

3.10.1 It has been necessary in some instances to make some assumptions in assessing the environmental impact of the K3 and WKN Proposed Developments. In accordance with best practice, the key assumptions are set out below, together with any limitations identified in undertaking this EIA:

- A variety of sources, including historical data, have been used to establish baseline conditions for the purposes of producing technical reports and chapters. These represent a snapshot in time, but aspects of the environment are dynamic and may change before, during and after the construction and operation of the K3 and WKN Proposed Developments. Potential changes have been identified within specific chapters where relevant and possible;
- The design, construction and completed stages of the K3 and WKN Proposed Developments will satisfy minimum environmental standards, consistent with contemporary legislation, practice and knowledge;
- Requirements will be attached to any DCO which control impacts during construction works in the form of a CEMP and will secure any mitigation measures detailed in the ES;
- At this stage the detailed design and construction methods of WKN Proposed Development are not finalised and therefore the EIA assessments have been undertaken on a worst-case basis using maximum parameters. It is assumed that the development will come forward within the parameters set out;
- It is assumed that the technical data provided by the Applicant is a robust and worst-case data set reflective of the K3 and WKN Proposed Developments;
- The K3 and WKN Proposed Developments will be operated in accordance with any IPPC permit issued by the Environment Agency (existing and new) and all contemporary relevant legislation including that as specified in

section 2.8 of Chapter 2 with regard to health and safety and preventing major accidents and disasters.

3.10.2 Any assumptions relevant to specific topics are set out in the Technical Chapters.



- Key Sites**
- 1 - SW/11/1291
  - 2 - SW/14/0224
  - 3 - 14/500327/OUT
  - 4 - 14/501181/COUNTY
  - 5 - 15/500348/COUNTY
  - 6 - 15/510589/OUT
  - 7 - 16/501228/FULL
  - 8 - 16/501484/CUNTY
  - 9 - 16/506193/ENVSCR
  - 10 - 17/505073/FULL
  - 11 - 18/500257/EIFUL
  - 12 - 18/500393/FULL
  - 13 - 15/502197/FULL
  - 14 - SW/13/1495
  - 15 - 18/502489/FULL
  - 16 - EN010090 (18/501923/ADJ)
  - 17 - 15/504458/FULL
  - 18 - 16/506935/COUNTY
  - 19 - 17/504034/COUNTY
  - 20 - SW/14/0191
  - 21 - 17/502678/COUNTY
  - 22 - 17/505919/COUNTY
  - 23 - 17/502834/FULL
  - 24 - 14/501588/OUT
  - 25 - 16/507877/FULL
  - 26 - 18/502190/EIHYB
  - 27 - 18/503873/ENVSCR
  - 28 - 16/507687/COUNTY

- Legend**
- K3 Site
  - WKN Site
  - 3KM area
  - Other developments within 3km of the site(s)
  - Local Plan Allocations within 3km of the site(s)

- Local Plan Allocations**
- A1 - Ridham and Kemsley, Sittingbourne
  - A10 - Milton Pipes, Mill Way, Sittingbourne
  - A17 - Land East of Iwade
  - MU1 - North West Sittingbourne
  - MU2 - North East Sittingbourne

TITLE  
**Figure 3.2a-  
 Cumulative developments  
 within 3Km of the Site(s)**

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 Wheelabrator Technologies Inc

Job  
 K3 and WKN DCO

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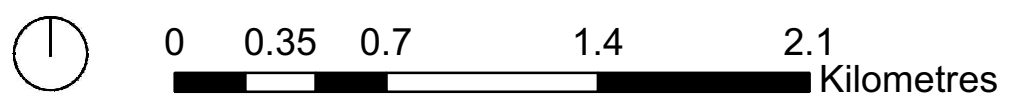
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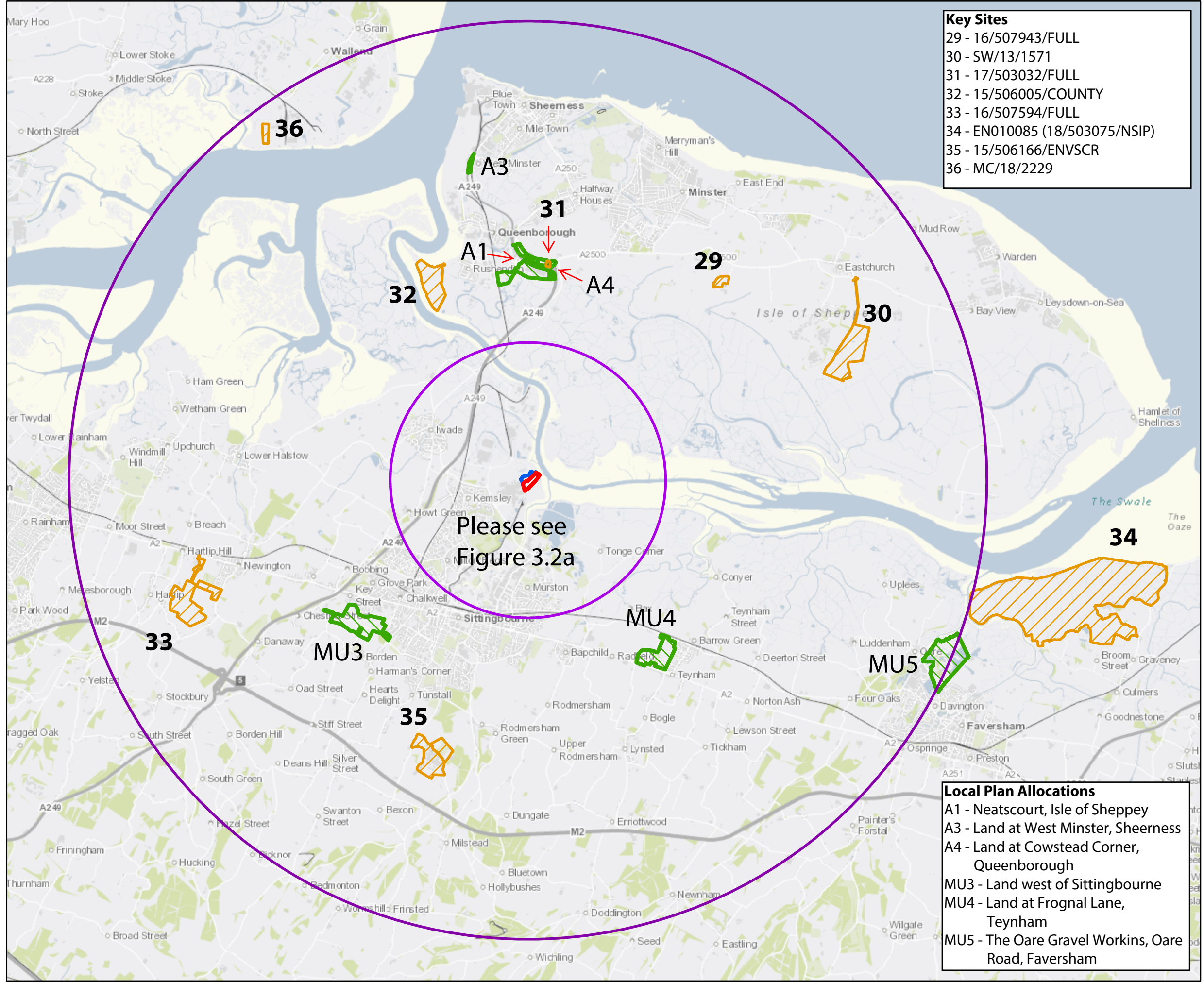
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- Key Sites**
- 29 - 16/507943/FULL
  - 30 - SW/13/1571
  - 31 - 17/503032/FULL
  - 32 - 15/506005/COUNTY
  - 33 - 16/507594/FULL
  - 34 - EN010085 (18/503075/NSIP)
  - 35 - 15/506166/ENVSCR
  - 36 - MC/18/2229

- Legend**
-  K3
  -  WKN
  -  10KM area
  -  3KM area
  -  Industrial and Energy developments within 10km of the site(s)
  -  Industrial/ Energy/Mixed use Local Plan Allocations within 10Km of the site(s)



Please see Figure 3.2a

- Local Plan Allocations**
- A1 - Neatscourt, Isle of Sheppey
  - A3 - Land at West Minster, Sheerness
  - A4 - Land at Cowstead Corner, Queenborough
  - MU3 - Land west of Sittingbourne
  - MU4 - Land at Frogal Lane, Teynham
  - MU5 - The Oare Gravel Workins, Oare Road, Faversham

TITLE  
**Figure 3.2b- Cumulative developments within 10Km of the site(s)**

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 Wheelabrator Technologies Inc

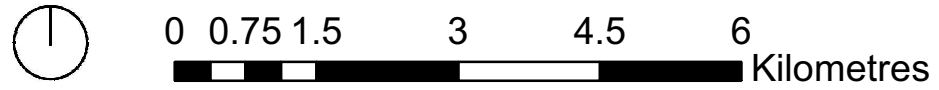
Job  
 K3 and Wheelabrator Kemsley North

SCALE AT A3 1:80,000      DATE February 2019      JOB NO. 13141



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