12 Landscape and Visual Resources

12.1 Introduction

12.1.1 This Chapter assesses the likely significant landscape and visual effects resulting from the WKN Proposed Development. This includes identification of the character and features of the landscape and townscape and consideration of the changes that would result as a consequence of the WKN Proposed Development. In addition, it considers the potential visual effects arising as a result of the WKN Proposed Development.

12.1.2 An assessment of the likely significant landscape, townscape and visual resource effects of K3 as consented was undertaken as part of the ES completed in 2010 pursuant to its Town and Country permission (see Document 3.3 submitted with the application). In summary the potential impacts of the construction of the K3 plant was considered. This determined that there would be no significant impacts on landscape or townscape character or views. The effect of the completed development was considered to be minor adverse and not significant on both landscape and townscape character. Views of the K3 plant were considered to be prominent in near views, becoming barely discernible within the existing industrial context in mid to long distance views. The overall visual effect of the completed development was considered to be moderate/minor adverse and not significant. A range of non-material amendments have also been made since the original consent, for matters including changes to the site layout, removal of the IBA facility and repositioning of surface water ponds, together with applications to form and improved access road and discharge planning conditions which did not change the overall conclusions of the assessment of effects on landscape, townscape and visual resources originally stated in the 2010 ES (see Document 3.3 submitted with the application). No structural modifications to the K3 facility are required pursuant to the practical effect of the K3 Proposed Development and therefore no additional effects are anticipated on landscape, townscape and visual resources beyond that identified previously. The effects from the K3 Proposed Development are not assessed further within this Chapter however, a cumulative scenario including the K3 Proposed Development is assessed.

12.1.3 The Chapter reports on studies, including a combination of field surveys and desktop research, to describe, classify and evaluate the existing resource. The principal objectives of the assessment are:

- to describe, classify and evaluate the existing landscape and townscape likely to be affected by the WKN Proposed Development during its construction, operational and future decommissioning development phases
- to identify visual receptors with views of the WKN Proposed Development
- to identify the likely significant effects on landscape, townscape and views, considering measures proposed to reduce or avoid any effects

identified

12.2 Regulatory and Policy Framework

Planning Policies

National Policy Statement for Energy (EN-1)

12.2.1 The overarching National Policy Statement for Energy at Section 5.9 states:

> *"The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales. The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character. The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation (Department of Energy and Climate Change (DECC), 2011a)."*

National Policy Statement for Renewable Energy Infrastructure (EN-3)

12.2.2 The National Policy Statement for Renewable Energy Infrastructure states:

> *"The IPC should expect applicants to seek to landscape waste/biomass combustion generating station sites to visually enclose them at low level as seen from surrounding external viewpoints. This makes the scale of the generating station less apparent, and helps conceal its lower level, smaller scale features. Earth bunds and mounds, tree planting or both may be used for softening the visual intrusion and may also help to attenuate noise from site activities (DECC, 2011b)."*

National Planning Policy Framework (NPPF)

12.2.3 The Department for Communities and Local Government published the National Planning Policy Framework (NPPF) in July 2018. The document sets out broad aims to achieve sustainable development in Section 2, including an environmental objective *'to contribute to protecting and enhancing our natural, built and historic environment'* at paragraph 8.

12.2.4 Strategic policies regarding Plan-making at Section 3 include, at paragraph 20, the sufficient provision for 'conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure'.

12.2.5 Section 6: Building a strong, competitive economy recognises that sites may have

to be found adjacent to or beyond existing settlements. In these circumstances development *'should be sensitive to its surroundings'* at paragraph 84.

12.2.6 Section 11: Making effective use of land recognises the need to safeguard and improve the environment when meeting the needs for development. Paragraph 118 promotes new habitat creation or the improvement of public access to the countryside. Paragraph 122 recognises the *'desirability of maintaining an area's prevailing character and setting… or of promoting regeneration and change'* and *'the importance of securing well-designed, attractive and healthy places'*.

12.2.7 Section 12: Achieving well-designed places. There are general policies about achieving high quality and inclusive design for all development (Paragraph 127). This is to ensure that developments will function well and add to the overall quality of the area, establish a strong sense of place and create an attractive and comfortable place to live, work and visit. Proposals should optimise the potential of the site to accommodate development. Developments should respond to the local character and history and reflect the identity of the surrounding built environment and landscape setting whilst not discouraging appropriate innovative design. The development should create safe and accessible environments that are visually attractive with appropriate and effective landscaping.

12.2.8 Section 15: Conserving and Enhancing the Natural Environment. Paragraph 170 states that 'Planning policies and decisions should contribute to and enhance the natural and local environment by; protecting and enhancing valued landscapes, sites of geological value and soils (in a manner commensurate with their statutory status or identified quality)' and by 'recognising the intrinsic character and beauty of the countryside' including the benefits of trees and woodland. Paragraph 171 states that 'Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues'. Paragraph 180 requires that new development is appropriate to its location, ensuring relatively undisturbed areas retain tranquillity and amenity value, and that the impact of light pollution from artificial light is limited within intrinsically dark landscapes.

12.2.9 The use of previously developed land should be encouraged and the remediation and mitigation of despoiled, degraded or derelict land. The creation, protection, enhancement and management of networks of biodiversity and green infrastructure should be planned for (Paragraph 114).

Kent County Council

12.2.10 The Kent Minerals and Waste Local Plan 3013 – 2030 was adopted in July 2016. Policy DM1 is concerned with Sustainable Development. The policy states that proposals should demonstrate that they have been designed to *'protect and enhance the character and quality of the Site's setting'*. The surrounding rural marshland and The Swale will be taken into consideration within this assessment.

Swale Borough Council

12.2.11 The Bearing Fruits 2031: The Swale Borough Local Plan was adopted in July 2017 and provides the policy baseline for the following issues relevant to the assessment:

- Policy ST1: Delivering Sustainable development in Swale

  9e. maintaining the individual character, integrity, identities and settings of settlements.

  11b. using landscape character assessments to protect, and where possible, enhance, the intrinsic character, beauty and tranquillity of the countryside, with emphasis on the estuarine, woodland, dry valley, down-land and horticultural landscapes that define the landscape character of Swale.

- Policy ST 5: The Sittingbourne Area Strategy
- Policy DM 14: General Development Criteria
- Policy DM 19: Sustainable Design and Construction
- Policy DM 22: The Coast
- Policy DM 24 Conserving and Enhancing Valued Landscapes
- Policy CP 4: Requiring Good Design
- Policy CP 7: Conserving and Enhancing the Natural Environment – Providing for Green Infrastructure

Relevant Guidance

12.2.12 As a matter of best practice, this assessment has been undertaken based on the relevant guidance on landscape and visual assessment. This includes:

- Guidelines for Landscape and Visual Impact Assessment 3rd Edition (Landscape Institute and Institute of Environmental Management and Assessment, 2013)
- Landscape Character Assessment – Guidance for England and Scotland (The Countryside Agency and Scottish Natural Heritage, 2002)

12.3 Methodology

Scoping and Consultation

12.3.1 The formal scoping exercise is set out in Chapter 3 of the Environmental Statement with a summary of consultation responses set out in Appendix 3.2.

12.3.2 The effects of the construction and operation of K3 as consented was undertaken as part of the planning process for the development. This assessment is available in Document 3.3 submitted with the planning application. No likely significant effects were identified.

12.3.3 The practical effect of the K3 Proposed Development will not require any changes to the built form or site layout to K3 as consented and therefore no likely significant effects on landscape, townscape or visual resources will result. Therefore, effects on landscape and visual resources from the K3 Proposed Development are not assessed within this Chapter of the ES but are available in Document 3.3 submitted with the planning application. However, a cumulative scenario including the K3 Proposed Development is assessed.

12.3.4 The landscape and visual resources sections of the scoping report refers to a commitment to consult with Kent County Council and Swale Borough Council regarding the choice of representative photographic viewpoint locations to inform the landscape, townscape and visual impact assessment. An email was sent to these two consultees on 19th September 2018 including a location plan with ZTV's and viewpoint locations previously identified for K3 and the set of corresponding photographs. Kent County Council responded by email on 24th September 2018 confirming that the proposed 12 viewpoints are approved (See Appendix 12.1). Kent County Council referred to the possibility of including a viewpoint from Conyer however, following preparation of the photomontages from viewpoints to the east of the WKN Site at Tonge Corner and the Saxon Shore Way it was considered that a further viewpoint from this direction would be unnecessary as K3 would obscure the majority of the WKN Proposed Development, preventing the possibility of significant effects on visual receptors.

Establishing Baseline Conditions

Study Area

12.3.5 The landscape, townscape and visual resources study area is defined by the WKN Proposed Development's Zone of Theoretical Visibility (ZTV). This is based on two key elements; a stack height of 99 m (above existing ground level, the tallest element of infrastructure) and main generating station building height of 58 m above existing ground levels (the tallest building). The proposed building ZTV has been recalculated to reflect the 58 m high maximum parameter. These two elements of the WKN Proposed Development have been used to generate ZTV's as, although the stack is the tallest element it is slender and relatively unobtrusive at long distances. The buildings, although shorter, have greater bulk and massing and could potentially be visible at greater distances than the stack. A maximum 10 km radius study area has been applied to capture all key receptors (See Figure 12.1 Rev.A). The revised proposed building ZTV is substantially the same as the proposed building ZTV within the submitted ES, which was based on a 43 m high building.

12.3.6 Planning consent has already been granted for K3 and at the time of writing,

construction of K3 is on-going and is anticipated to be fully operational by late 2019. The landscape, townscape and visual resources chapter of the 2010 ES available in Document 3.3 submitted with the application, includes an assessment of the K3 Proposed Development against a baseline situation of a cleared development site. However, K3 as consented and built forms part of the baseline conditions adopted within this Chapter of the ES.

Proposed Approach

12.3.7 As set out in the GLVIA3, the LVIA assesses landscape and visual effects separately, although the procedure for assessing each of these is closely linked. A clear distinction has been drawn between landscape and visual effects as described below:

- Landscape effects relate to the effects of a proposed development on the physical characteristics of the landscape and townscape and its resulting character and quality

- Visual effects relate to the effects on views experienced by visual receptors (e.g. residents, footpath users, tourists etc.) and on the visual amenity experienced by those people

12.3.8 The LVIA assesses the short-term effects of the construction and decommissioning phases and the long-term effects relating to the completed WKN Proposed Development.

12.3.9 Consideration has been given to the likely seasonal variations in the visibility of the WKN Proposed Development, including variations in weather conditions and deciduous vegetation.

12.3.10 The assessment is illustrated by photographs towards the existing WKN Site from 12 publicly accessible viewpoints. Photomontages have been prepared for all 12 key viewpoint locations to illustrate the WKN Proposed Development within the existing context of the surrounding landscape and townscape.

Assessment of Effects

Receptor Sensitivity

12.3.11 The sensitivity or susceptibility of a landscape or townscape to change varies according to the nature of the existing resource and the nature of the proposed change. Considerations of value, integrity and capacity are all relevant when assessing sensitivity. For the purpose of this assessment, these terms are defined as follows:

- Value: the relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons. Landscapes can be recognised through national, regional or local designation. Views tend not to be designated, but value

can be recognised through a named location shown on a map, or through the creation of a parking lay-by or location of a bench to appreciate a view

- Integrity: the degree to which the value has been retained, the condition and integrity of the landscape or the view

- Capacity: the ability of a landscape, townscape or view to accommodate the proposed change while retaining the essential characteristics which define it

12.3.12 Sensitivity, or susceptibility, is not readily graded in bands. However, in order to provide both consistency and transparency to the assessment process, Tables 12.1 and 12.2 below define the criteria which have guided the judgement as to the sensitivity of the receptor and the susceptibility to change.

12.3.13 The sensitivity of the landscape and townscape character areas to the type of change associated with the WKN Proposed Development has been considered, based on guidance contained within GLVIA3. Table 12.1 below summarises criteria used to assess the sensitivity of the landscape to change.

Sensitivity	Typical Descriptors
High	Landscape/ townscape value recognised by national designation. The landscape/ townscape resource has little ability to absorb change of the type proposed without fundamentally altering its present character and/or is of High importance or value. Sense of tranquillity or remoteness specifically noted in Landscape Character Assessment. High sensitivity to disturbance specifically noted in Landscape Character Assessment. The qualities for which the landscape/townscape is valued are in good condition, with a clearly apparent distinctive character and absence of detractors.
Medium	Landscape/townscape value is recognised or designated locally. The landscape/townscape resource has moderate capacity to absorb change of the type proposed without significantly altering its present character and/or is of Medium importance or value. The landscape/townscape is relatively intact, with a distinctive character and few detractors; and is reasonably tolerant of change.
Low	The landscape/townscape resource is tolerant of change of the type proposed without detriment to its character and/or is of Low importance or value. Landscape/townscape integrity is low, with a poor condition and a degraded character with the presence of detractors such as dereliction; and the landscape/townscape has the capacity to potentially accommodate considerable change.

Table 12.1: Landscape or Townscape Sensitivity to Change

12.3.14 The sensitivity of visual receptors has been assessed, based on guidance contained within GLVIA3. Sensitivity is dependent upon several factors including the location and context of the viewpoint, whether views are continuous, fragmented, or intermittent (i.e. the dynamic nature of a view gained while travelling through an area), the importance of views and the occupation and

activity of the visual receptor. Influences such as the number of receptors affected, popularity of views and the significance of the views in relation to valued landscapes or features also determines the importance of views.

Sensitivity	Typical Descriptors
High	Large number or high sensitivity of viewers assumed. Viewers' attention very likely to be focused on landscape. E.g. Residents experiencing views from dwellings; users of strategic recreational footpaths and cycleways; people experiencing views from important landscape features of physical, cultural or historic interest, beauty spots and picnic areas.
Medium	Viewers' attention may be focused on landscape, such as users of secondary footpaths, and people engaged in outdoor sport or recreation. e.g. horse riding or golf. Occupiers of vehicles in scenic areas or on recognised tourist routes.
Low	May include people at their place of work, or engaged in similar activities, whose attention may be focussed on their work or activity and who may therefore be potentially less susceptible to changes in view. Occupiers of vehicles whose attention may be focused on the road.

Table 12.2: Visual Receptor Sensitivity to Change

Magnitude of Impact (Change)

12.3.15 The next stage of the assessment process has identified the potential magnitude of change to landscape or townscape character and views arising from the WKN Proposed Development. The assessment distinguishes between landscape or townscape impacts and impacts upon views, based on guidance contained within GLVIA3. The former considers the impact upon landscape or townscape character taking account of direct impacts upon the physical resource (landform, vegetation, pattern, etc.) and any indirect impacts arising from the WKN Proposed Development, which would be sufficient to impact on the inherent character of a landscape or townscape area. The latter considers the direct impact on views perceived by people from publicly accessible locations. Potential impacts are also considered in terms of their duration i.e. whether they are permanent or temporary.

12.3.16 The magnitude or scale of change brought about by the WKN Proposed Development upon both the existing landscape or townscape resource and upon views, both beneficial and adverse, has been assessed as set out in Table 12.3 below.

Magnitude	Typical Descriptors
Large	The proposed change may form a dominant or immediately apparent feature that would significantly alter and change view. Where there are substantial changes affecting the character of the landscape/townscape, or important elements through loss of existing features. Proposed Development within or close to affected landscape/townscape.

	Scale, mass and form of development out of character with existing elements.
Medium	The proposed change may form a prominent new element that would affect and change the view. The Proposed Development forms a visible and recognisable feature in the landscape/townscape. Proposed Development is within or adjacent to affected character area/type. Scale of development fits with existing features.
Small	The proposed change may constitute only a minor component of wider views, which might be missed by the casual observer or receptor. Awareness of the proposed change would not have a marked effect on the overall view. Changes to the physical landscape/townscape, its character and the perception of the landscape/townscape are slight. Long distance to affected landscape/townscape with views toward the character area/type the key characteristic.
Negligible	Only a very small part of the proposed change would be discernible, and / or it is at such a distance that it would be scarcely appreciated. Consequently, it would have very little effect on view. The effect of change on the perception of the landscape/townscape, the physical features or the character is barely discernible or there is no change.

Table 12.3: Magnitude of Impact

12.3.17 GLVIA3 states that the level of effects is ascertained by professional judgement based on consideration of the intrinsic sensitivity of the baseline landscape, townscape or visual receptor, the receptors susceptibility to the development and the magnitude of change as a result of the proposal. A significance matrix provided in Table 12.4 summarises this process. This process has enabled the potential significance of landscape, townscape and visual effects to be made.

Landscape, Townscape and Visual Sensitivity or Susceptibility	Magnitude of Change			
	Negligible	Small	Medium	Large
Low	Negligible	Slight or Negligible	Slight	Moderate
Medium	Slight or Negligible	Slight	Moderate or Slight	Substantial
High	Slight or Negligible	Moderate or Slight	Substantial	Very Substantial

Table 12.4: Significance Matrix

12.3.18 The effect of relevant aspects of the WKN Proposed Development on the landscape and townscape has been described and evaluated against the following criteria, defined as:

- **Very Substantial adverse:** Where the proposed changes cannot be mitigated; would be completely uncharacteristic and would substantially

damage the integrity of a valued and important landscape or townscape

- **Substantial adverse**: Where the proposed changes cannot be fully mitigated; would be uncharacteristic and would damage a valued aspect of the landscape or townscape

- **Moderate adverse**: Where some elements of the proposed changes would be out of scale or uncharacteristic of an area

- **Slight adverse:** Where the proposed changes would be at slight variance with the character of an area

- **Negligible adverse:** Where the proposed changes would be barely discernible within the landscape/townscape or have a barely discernible influence over a landscape/townscape

- **Neutral:** Where the Proposed Development would be in keeping with the character of the area and/or would maintain the existing quality or where on balance the Proposed Development would maintain quality (e.g. where on balance the adverse effects of the Proposed Development are offset by beneficial effects)

- **Negligible beneficial:** Where the proposed changes would be barely discernible within the landscape/townscape

- **Slight beneficial:** Where the proposed changes would reflect the existing character and would slightly improve the character and quality of the landscape or townscape

- **Moderate beneficial:** Where the proposed changes would not only fit in well with the existing character of the surrounding landscape or townscape, but would improve the quality of the resource through the removal of detracting features

- **Substantial beneficial:** Where the proposed changes would substantially improve character and quality through the removal of large-scale damage and dereliction and provision of far reaching enhancements

12.3.19 The effect of relevant aspects of the WKN Proposed Development on views has been described and evaluated as follows:

- **Very Substantial adverse:** Where the proposed changes would form the dominant feature or would be completely uncharacteristic and substantially change the scene in highly valued views.

- **Substantial adverse:** Where the proposed changes would form a major part of the view, or would be uncharacteristic, and would alter valued views.

- **Moderate adverse:** Where the proposed changes to views would be

prominent, out of scale or uncharacteristic with the existing view.

- **Slight adverse:** Where the proposed changes to views would be recognisable or at slight variance with the existing view.
- **Negligible adverse:** Where the proposed changes would be barely discernible within the existing view.
- **Neutral:** Where the proposed development would be imperceptible or would be in keeping with and would maintain the existing views or, where on balance, the Proposed Development would maintain the quality of the views (which may include adverse effects of the proposed development which are offset by beneficial effects for the same receptor).
- **Negligible beneficial:** Where the proposed changes would be barely discernible within the existing view.
- **Slight beneficial:** Where the proposed changes to the existing view would be in keeping with and would improve the quality of the existing view.
- **Moderate beneficial:** Where the proposed changes to the existing view would not only be in keeping with but, would greatly improve the quality of the scene through the removal of visually detracting features.
- **Substantial beneficial:** Where the proposed changes to existing views would substantially improve the character and quality through the removal of large-scale damage and dereliction and provision of far reaching enhancements.

12.3.20 The level of effects is described as very substantial, substantial, moderate, slight or negligible. Where negligible adverse and beneficial effects occur within the same view or same landscape/townscape, the effect can be described as neutral on balance. In the assessment those levels of effect indicated as being 'very substantial' or 'substantial' may be regarded as significant effects. An accumulation of individual 'moderate' effects, for instance experienced by a visual receptor during a journey, may also be regarded as a significant sequential effect.

12.3.21 The assessment matrix at Table 12.4 provides a framework for the assignment of levels of effect for each impact identified, together with professional judgement. Long term, day time operational effects form the primary focus of this assessment as these are most likely to result in significant effects. To avoid the need to include separate matrices for assessing the different nature of short term or temporary effects of the construction phase and the relatively limited effects of night time light sources, the same matrix is used to base the assessment on and the assessor has the opportunity to downgrade the level of effect to reflect the reduced duration of the effect or the reduced visibility of the night time context. All assessment conclusions are supported by reasoned justification.

12.3.22 The following considerations are relevant when evaluating the magnitude of

visual change:

- Distance: the distance between the receptor and the proposed development. Generally, the greater the distance, the lower the magnitude of change.
- Extent: the extent of the proposed development which is visible
- Proportion: the arc of view occupied by the proposed development in proportion to the overall field of view. A panoramic view, where the proposed development takes up a small part of it, will generally be of lower magnitude than a narrow, focussed view, even if the arc of view occupied by the proposed development is similar
- Duration: the duration of the effect. An effect experienced in a single location over an extended period is likely to result in a higher magnitude of change than an effect which is of a short duration, such as a view from a road
- Orientation: the angle of the view in relation to the main receptor orientation, where there is a dominant direction to the vista
- Context: the elements, which in combination provide the setting and context to the proposed development

Limitations and Assumptions

12.3.23 No limitations have been identified that would affect the robustness of the assessment for EIA purposes. Maximum design parameters have been adopted for buildings and infrastructure to ensure a worst-case scenario has been assessed. As a final design freeze has not been achieved at this stage, which would identify material finishes and colours, it has been assumed that the WKN Proposed Development would be predominantly pale grey to reflect adjacent infrastructure at Kemsley Paper Mill.

12.4 Baseline Conditions

12.4.1 The area delineated by the assessment boundary consists of land adjacent to the Kemsley Paper Mill site on the northern edge of Sittingbourne. This land lies near the shores of The Swale, the body of water which separates north Kent from the Isle of Sheppey (See Figure 12.2).

12.4.2 Much of the main area of the WKN Site comprises hardstanding for the K3 construction temporary laydown area. A small area of ruderal and scrub vegetation is in the northern part of the WKN Site near the Saxon Shore Way footpath.

12.4.3 The context of the WKN Site is divided between the contrasting environments of the industrial townscape of Sittingbourne and the natural estuary landscape of The Swale. Large scale industrial buildings and stacks at the Kemsley Paper Mill

site form the western assessment boundary, separating the location from the residential districts of Sittingbourne. To the south lies the extensive construction site for K3 and south of this lies the landform of the restored landfill site at the confluence of The Swale and Milton Creek. The Saxon Shore Way long distance footpath follows the top of the earth bund sea defences beside The Swale and Milton Creek to the north-east and south-east. A waste water treatment works, Morrison's distribution centre, Knauf facility and Ridham Docks including the MVV Biomass Power Plant together with further ongoing industrial development are currently expanding in the area to the north of Kemsley Paper Mill.

Landscape Designations

12.4.4 There are no designated landscapes within the WKN Site (See Figure 12.3). The North Kent Marshes Special Landscape Area (SLA), which is also described as the Area of High Landscape Value Kent Level in the Bearing Fruits 2031 Swale Borough Local Plan 2017, extends over the Swale and nearby coastal landscape. This area includes the Chetney and Greenborough Marshes which lie to the east and south of the WKN Site and extend along Milton Creek and the Elmley Marshes, Luddenham and Conyer Marshes, South Sheppey Marshes and Mudflats and Elmley Island in the wider landscape. The Swale Borough Local Plan recognises that the open coastal landscapes and coastal margins enhance the value of the borough's landscape. A second Area of High Landscape Value referred to as Swale Level lies in two areas approximately 1.75 km to the south and 2.8 km to the west of the WKN Site. The AHLV coincides with character areas including the Teynham Fruit Belt and Lower Halston Clay Farmlands.

12.4.5 The Kent Downs Area of Outstanding Natural Beauty (AONB) lies on high land approximately 7 km to the south of the WKN Site.

Scheduled Ancient Monuments

12.4.6 There are no Scheduled Ancient Monuments which lie within the WKN Site area. Scheduled Ancient Monuments within the study area and effects upon them are described in Chapter 13 of this ES.

Conservation Areas

12.4.7 There are no conservation areas which are covered by the ZTV within the immediate vicinity of the WKN Site.

Topography

12.4.8 The main part of the WKN Site and most of its surroundings comprise a flat area of hardstanding and lies at approximately 6 m AOD within the coastal plain of The Swale estuary. The restored landfill site to the south rises to approximately 15 m high. This man-made landform forms an uncharacteristic and distinctive feature in the flat estuarine landscape. The land rises gradually over the Kent plains to the south before rising more steeply to form the North Downs, which rise to approximately 200m AOD 7 km to the south.

Vegetation

12.4.9 There is no significant vegetation within the majority of the WKN Site. A small clump of ruderal and woody vegetation is in the north-east corner of the WKN Site.

Settlement

12.4.10 The WKN Site lies on the industrial northern edge of Sittingbourne, which forms the largest settlement within the district of Swale. Development dates mainly from the 19th and 20th centuries, clustered around the A2 road and railway which pass through the centre of the town. The rapidly expanding industrial and commercial district which extends from the edge of Sittingbourne north to Ridham Docks forms the immediate context to the WKN Site.

Public Rights of Way

12.4.11 The Saxon Shore Way long distance path passes immediately east of the WKN Site as it follows the top of the sea defences which line The Swale and Milton Creek. The path extends along the Kent coastline throughout the Swale District. The footpath is defined as ZU1 north of Milton Creek and ZU2 south of Milton Creek (See Figure 12.4 Rev. A). KCC is currently working in partnership with Natural England to develop the England Coast Path in this region. The national trail is likely to follow the alignment of the Saxon Shore Way in the vicinity of the WKN Proposed Development.

Views

12.4.12 The WKN Site is currently concealed in views from the majority of the settlement of Sittingbourne by industrial development on the edge of the town, including K3 and the restored landfill mound. To the north-east of the WKN Site, where views are slightly less constrained, the Saxon Shore Way long distance footpath forms the location for the closest visual receptors as they follow the alignment of the sea defences. However, views are generally limited to the stacks and tops of taller infrastructure in the northern half of the Kemsley Paper Mill and K3. There are limited near views into the WKN Site due to intervening fences, vegetation and stored materials for the construction of K3. Views towards the WKN Site can be gained from a section of path which extends approximately 750 m north along the edge of the Swale from the WKN Site. Users of this path potentially form receptors of the highest sensitivity. Industrial development, the light railway, Swale Way road and over ground pipelines provide physical barriers between the settlement and the Swale, making access to the path difficult. The footpaths at Milton Creek and the Church Marshes Country Park provide the most obvious points for direct public access to the Saxon Shore Way. The industrial edge of Sittingbourne forms a dominant urban influence for walkers using this section of the path and a physical barrier and, as a result, may be less accessible and attractive to the local community and to visitors to the area.

12.4.13 Views of the WKN Site from the premises along the industrial edge of Sittingbourne would generally be fragmented by intervening development and

gained by people at their place of work, who are of low sensitivity. The gently rising, open landscape of the Isle of Sheppey to the north-east contains several small settlements, public rights of way and roads which provide vantage points for receptors to gain long views back to the WKN Site. The industrial townscape of Sittingbourne is visible as an expanse of development along The Swale, of which the WKN Site forms a small fragment of industrial land.

12.4.14 The Swale and Milton Creek form transport corridors which define the edge of Sittingbourne and divides the towns' industrial edge from the salt marsh, mudflats and open water of the estuary at Elmley Reach and Clay Reach. Views by occupants of vessels would be gained towards the WKN Site with a backdrop of dominant industry at Kemsley Paper Mill. Receptors use the Swale and Milton Creek for both leisure and commercial purposes and would range in sensitivity from medium to low.

12.4.15 Photographs have been taken from various viewpoints which are representative of views gained by visual receptors. These viewpoints are the same as those assessed for the adjacent K3 and were undertaken in December 2016 and have been reused for the purposes of this assessment. Figures 12.1 Rev. A and 12.4 Rev. A show the location of the 12 photograph viewpoints, with the associated photographs provided at Figures 12.5 to 12.16. No photographic viewpoints have been identified within areas of the ZTV where only the stack would be visible, where intervening landform of buildings would obscure the proposed buildings and infrastructure. The top of the new stack would be visible in the immediate vicinity of six existing stacks and any change in view would not be immediately perceptible and would not be sufficient to result in significant effects on visual receptors or landscape character. Viewpoints have been chosen which coincide with the ZTV for the tallest proposed building, which would also include the proposed stack.

Viewpoints

Viewpoint 1. Saxon Shore Way/Footpath ZU1, north of the WKN Site

12.4.16 Near open views looking south (750 m to WKN Site) from the long-distance footpath which follows the top of the sea defences. The view comprises a combination of industry and natural habitats in the estuarine landscape of The Swale. The large-scale buildings and stacks of K3 and Kemsley Paper Mill form the focus of the view and together with the cranes and the jetty, form strong vertical elements in the relatively flat landscape. The grassy mound of the restored landfill creates an uncharacteristic landform in the estuary. Mud flats and salt marshes are typical features of The Swale in the foreground. Overhead power lines cross the landscape in the middle distance. The WKN Site is visible beyond security fencing, defined by clumps of scrub and ruderal vegetation, which are relatively insignificant in the view.

Viewpoint 2. Saxon Shore Way/Footpath ZU1, north-east of the WKN Site

12.4.17 Near filtered view through palisade fence looking south west immediately adjacent to the assessment boundary from the long-distance footpath. The large-

scale buildings and stacks of K3 dominate the skyline in the centre of the view. Visible plumes and noise associated with operational uses add to the urban experience for receptors. The landform of the restored landfill screens distant views to the left. Overhead power lines and high mast lighting at Ridham Dock are visible to the right beyond more open views along the footpath which follows the sea defences and beside The Swale.

Viewpoint 3. Saxon Shore Way/Footpath ZU1, south of the WKN Site

12.4.18 Near open view looking north east (1.25 km to WKN Site) from the long-distance footpath as it follows the western edge of Milton Creek. The flat expanses of salt marsh, reed bed and scrub occupy the foreground through which passes the raised landform of the sinuous sea wall on which the Saxon Shore Way is located. The open water of the creek curves towards the swale in the distance. The tall slender stacks of the K1 CHP (in the Paper Mill) and K3 and the large blocks of the DS Smith buildings and K3 buildings dominate the majority of the skyline. The grassed landform of the restored landfill site forms a prominent change in topography which extends in front of the WKN Site. The land within the WKN Site is not visible in this view. There is a strong contrast between relatively wild landscape and industrial townscape in this view.

Viewpoint 4. Swale Way, south-west of the WKN Site

12.4.19 Near open view looking north-east (2 km to WKN Site) from the road as it crosses the Church Marshes Country Park on embankment. The K1 and K3 buildings and infrastructure form a prominent cluster of industrial developments which dominate the skyline. The top of the restored landfill mound and high mast lighting columns are also visible beyond the trees. The earth works of the Castle Rough ancient monument are covered with scrub in the middle distance. The land within the WKN Site is not visible in this view. Rough grassland, scrub and marshland occupy much of the intervening landscape, contrasting with the backdrop of large built forms.

Viewpoint 5: Church Marshes Country Park

12.4.20 Mid-distance open view looking north east (1.9 km to WKN Site) from a man-made landform within public open space. Rough grassland, ruderal vegetation and scrub occupy much of the foreground providing a naturalistic context for the industrial development in the distance. Large pale building blocks and tall slender stacks at the K1 CHP lie prominently on the horizon. Houses on the edge of a large residential district sit at a lower level to the left of the view with a small section of K3 also visible. Pylons and overhead power lines dominate the view. Belts of trees frame the right-hand side of the view and partly obscure the restored landfill site beyond. The WKN Site is concealed within the view behind the Kemsley Paper Mill.

Viewpoint 6. Kemsley residential edge

12.4.21 Mid-distance channelled view looking east (1.5 km to WKN Site) from the new distributor road between residential and commercial districts. The varied roofline

of houses to the right contrasts with the long, low flat roofs of commercial properties to the left. The buildings and stacks at Kemsley Paper Mill and overhead power lines form a prominent cluster of vertical elements to terminate the view. Roadside planting forms a minor element within this urban view. The WKN Site is concealed behind industrial buildings.

Viewpoint 7. Saxon Shore Way/Footpath ZU2, south-east of the WKN Site

12.4.22 Mid-distance open views looking west (1.3 km to WKN Site) from the long-distance footpath which follows the top of the sea defences. The view is predominantly of a natural landscape which focuses on the prominent buildings and stacks of Kemsley Paper Mill and K3. The flat expanses of Little Murston Nature Reserve to the left and the open water of the Swale contrast with the mound of the restored landfill and the numerous vertical accents of stacks, pylons and cranes. The long low buildings of the Morrisons distribution centre are visible in the distance to the right of the view. The residential edge of Sittingbourne is visible through trees to the left of the view, with rising ground within the North Downs AONB beyond. Only the extreme north eastern corner of the WKN Site is visible in this view. The remainder is screened by K3.

Viewpoint 8. Iwade residential edge

12.4.23 Mid-distance filtered views looking south west (1.75 km to WKN Site) from public open space within a housing development at Iwade. Hedgerow and shrub planting partly obscure views of farmland beyond and industrial and commercial development at Sittingbourne. Numerous pylons and overhead lines form vertical accents throughout the view. K3 and long low Morrison's distribution warehouses extend along the horizon. The A249 crosses the landscape in the middle distance, the moving traffic forming a recognisable element. Woodland blocks and tree belts partially break up the view and soften the edges of development. The WKN Site is concealed behind industrial buildings.

Viewpoint 9. Church Road at Tonge Corner

12.4.24 Mid-distance open view looking north west (2.4 km to WKN Site) from a low ridge of land adjacent to the hamlet. A foreground of arable farmland is subdivided by tree belts and woodland blocks. Overhead power lines crossing the landscape in the middle distance and the buildings and stacks of Kemsley Paper Mill and K3 form prominent elements in the view. A narrow band of dark solar panels is visible in the middle distance. The landfill mound and K3 screen any views of the WKN Site. Trees and garden vegetation filter views to the right of the Swale and the Isle of Sheppey.

Viewpoint 10: Elmey Marshes Nature Reserve, public right of way

12.4.25 Mid-distance open view looking south west (1.75 km to WKN Site) from the footpath at the public car park on the Isle of Sheppey. The view is a combination of the simple open expanses of grassland and sky. The Swale cuts through the middle of the view with the industry that lines it extending across the whole view. The stacks and buildings at K3, Kemsley Paper Mill and the MVV biomass

power plant, buildings at Ridham Docks and Knauf and numerous pylons form vertical elements in the landscape. The man-made landform of the restored landfill forms an uncharacteristic mound in the flat landscape. The wooded ridge of the North Downs forms a distant horizon. The WKN Site is visible in front of Kemsley Paper Mill.

Viewpoint 11: Kings Ferry Bridge

12.4.26 Mid-distance open view looking south (2.6 km to WKN Site) from the footway on the bridge over The Swale. The bridge parapet partially obscures The Swale, mudflats and salt marshes, focusing attention on the continuous bands of industrial and commercial development which are characteristic of the urban edge of Sittingbourne. No single element is more prominent than the others, however the pair of pylons at the water's edge are significantly taller than any other feature. Clusters of cranes and the biomass power plant at Ridham Docks, the Knauf building and stacks and pylons break the skyline throughout the view. The wooded horizon of rising land at the North Downs is partially visible beyond the industrial edge.

Viewpoint 12. Furze Hill, public right of way

12.4.27 Distant open view looking south (5.2 km to WKN Site) from high ground on the Isle of Sheppey. The mixed agricultural land divided into large irregular fields extends down to The Swale. The limited extent of hedgerows and trees creates an expansive nature within the farmland, which is reflected in the wide, open sky. The industrial edge of Sittingbourne forms a contrasting urban texture in the landscape. The two bridges, pylons and stacks form prominent features in the flat, open landscape. The level horizon of the North Downs remains largely unbroken. Traffic on the new A249 dominates the middle distance. The WKN Site is barely perceptible in the distance.

Existing Landscape and Townscape Character

National Landscape Character

12.4.28 The WKN Site lies within National Character Area 81: Greater Thames Estuary, as defined in Natural England's (formerly the Countryside Agency and English Nature) National Character Area Profiles which divides England in to 159 Joint Character Areas. Other character areas within the 10 km radius study area include 113 North Kent Plain and 119 North Downs (see Figure 12.3). The national character areas provide a broad character context for the analysis of the baseline conditions.

12.4.29 The key characteristics of these areas are as follows;

Greater Thames Estuary

- Low lying coastal landscape of salt marshes and reclaimed farmed marshland, dominated by wide open skies

- Mixed arable and grazed pasture subdivided by a network of reed filled drainage ditches
- Beaches and mudflats often separated from the farmland by sea walls
- Hedgerows and trees limited to margins of the character area further inland
- Small settlements and hamlets associated with historically important fishing and boat building locations

North Kent Plain

- Gently undulating fertile land occupied by a mix of intensively farmed open fields, grazing marsh and reed beds
- Large fields are exposed with few hedgerows or trees
- Orchards and horticultural areas sub-divided by shelter belts provide contrast
- Overhead power lines and pylons are prominent in the open landscape
- Settlements often dominate the landscape due to the lack of vegetation on urban edges

Local Landscape Character Assessment

12.4.30 The character of the local landscape within the Borough of Swale has been assessed as part of the *Swale Landscape Character Assessment and Guidelines, March 2005.* This assessment has identified 42 landscape character areas within the district. This assessment has been updated through the preparation of the *Swale Landscape Character and Biodiversity Appraisal Supplementary Planning Document* in September 2011. The appraisal retains the same character areas from the 2005 assessment, whilst providing additional detail regarding landscape sensitivity and condition. A local level study area has been established to assess the character of the landscape at greater detail near the WKN Site, where the potential for significant effect on receptors exists. See Figures 12.17. Eight-character areas coincide with the ZTV within this study area as follows:

- 2 Elmley Marshes
- 14 Elmley Island
- 11 South Sheppey Marshes and Mudflats
- 1 Chetney and Greenborough Marshes
- 25 Lower Halstow Clay Farmlands

- 24 Iwade Arable Farmlands
- 31 Teynham Fruit Belts
- 8 Luddenham and Conyer Marshes

12.4.31 The key characteristics of these areas are as follows:

Elmley Marshes

- Flat alluvial marshland with sinuous reed filled ditches
- Atmospheric and tranquil landscape with large open and often dramatic skies
- Rough grassland largely used for cattle and sheep grazing
- Important wetland habitats
- Important transport routes A249, railway and link bridges onto island
- Large-scale landscape with little sense of enclosure
- Boats in the swale
- Strong sense of place, remote and isolated

12.4.32 The condition of the Elmley Marshes character area is defined as good and the intrinsic sensitivity is high. Coincides with AHLV Kent Level/North Kent Marhses SLA.

Elmley Island

- Outcrops of high land formed of London clay contrasting with the surrounding flat open alluvial marshland
- Long views across open marsh intermittently interrupted by trees and scrub growing on the ridge
- 3,100 acres Elmley Estate farming practices managed for promotion of biodiversity
- Historic buildings in various states of repair
- Numerous man-made features found in the landscape, provide strong evidence of the history of the area

12.4.33 The condition of the Elmley Island character area is defined as good and the intrinsic sensitivity is high. Coincides with AHLV Kent Level/North Kent Marshes SLA.

South Sheppey Marshes and Mudflats

- Vast, atmospheric and tranquil landscape with large, open and often dramatic skies, with extensive uninterrupted panoramic views
- Alluvial soils on land, tidal mudflats and marine beaches in estuary
- Sea walls form the only man-made element within the landscape
- Unique flora and fauna specially adapted to harsh environmental conditions
- Vegetation limited to coarse, hummocky ground cover in rusty browns, green and pink
- Unsettled with limited pedestrian access

12.4.34 The condition of the South Sheppey Marshes and Mudflats character area is defined as good and the intrinsic sensitivity is high. Coincides with AHLV Kent Level/North Kent Marshes SLA.

Chetney and Greenborough Marshes

- An area of traditional coastal marsh
- Flat grazing marsh, saltmarsh and mud flats. Natural and man-made features include ditches, fleets and counter walls
- Scattered isolated patches of scrub
- Major transport routes and power lines cut across the marsh
- Large areas designated for the protection of its ecologically important habitats
- Atmospheric and tranquil landscape with large open and often dramatic skies
- Uncharacteristic undulations on the periphery of Sittingbourne reflect the former areas of landfill
- Large industrial units including the Kemsley Paper Mill are highly visible within the largely flat and treeless marshland
- Visually, certain areas are dominated by the large-scale industries present within adjacent areas, which sit inharmoniously beside this flat open landscape….at Kemsley north of Sittingbourne, the area is heavily influenced by industry, which has a direct impact on the wider landscape in terms of long-distance views

12.4.35 The condition of the Chetney and Greenborough Marshes character area is

defined as good and the intrinsic sensitivity is high. Coincides with AHLV Kent Level/North Kent Marshes SLA.

Lower Halstow Clay Farmlands

- Mixed geology of London clay and outcrops of head brick earth and Woolwich beds, steeply rising to the south
- Mixed agricultural land use with small-scale fields of pasture and localised orchards
- Contrast between abutting marshland and farmland with hillside and ridge backdrop
- Narrow lanes with impressive estuary views
- Weak landscape structure with scattered mature standard trees and fragmented over-mature roadside hedges
- Settlement limited to roadside cottages fixed mobile homes and isolated farms. Small scale industrial works

12.4.36 The condition of the Lower Halstow Clay Farmlands character area is defined as moderate and the intrinsic sensitivity is high. Coincides with AHLV Swale Level.

Iwade Arable Farmlands

- Mixed geology, clay and fertile drift soils
- Cereal production has replaced traditional orchards
- Medium to large scale fields. Fragmentation of hedgerows
- Hawes and Wardwell Woods are larger woodlands on a prominent hillside near the coast
- Valley and hill setting to village of Newington with landmark church
- Isolated farmsteads and cottages
- Isolated historic properties. Elsewhere mixed 20th century development
- Intrusive overhead powerlines
- Major trunk road, rail link and enclosed, winding country lanes

12.4.37 The condition of the Iwade Arable Farmlands character area is defined as poor and the intrinsic sensitivity is medium.

Teynham Fruit Belts

- Undulating intimate landscape composed of small hills and valleys
- Complex geology of fertile drift deposits, head gravel and London clay
- Small scale well managed network of orchards and occasional hop fields. Elsewhere enlarged arable and grazing fields
- Birth place of commercial fruit growing at Osiers Farm
- Narrow winding lanes enclosed by mature hedgerows and shelter belts
- Tracks, lanes and historic buildings raised above adjacent areas, which is indicative of the areas susceptibility to flooding
- Mixed traditional historic houses and farms. 20th century residential and commercial development
- Main transport routes include the railway and A2
- Important local landmark at Tonge Mill and pond

12.4.38 The condition of the Teynham Fruit Belts character area is defined as moderate and its intrinsic sensitivity is medium. Coincides with AHLV Swale Level.

Luddenham and Conyer Marshes

- Flat alluvial marshland with sinuous reed filled ditches
- Large open and often dramatic skies
- Rough grassland largely used for cattle and sheep grazing
- Important wetland habitats
- Access routes limited to Harty Ferry approach and Conyer
- Boats in the Swale and Creek
- Large-scale landscape with little sense of enclosure
- Strong sense of place, remote and isolated

12.4.39 The condition of the Luddenham and Conyer Marshes character area is defined as good and the intrinsic sensitivity is high. Coincides with AHLV Kent Level/North Kent Marhses SLA.

Local Townscape Character Assessment

12.4.40 The WKN Site lies wholly within the Sittingbourne urban area which lies outside

any of the landscape character areas identified within the Swale Borough Councils assessment. Therefore, for the purposes of this assessment, the settlement which lies within the study area has been divided into two separate townscape character areas which display distinct characteristics, Sittingbourne Industrial/Commercial and Sittingbourne Residential (See Figure 12.17). The following key characteristics of the townscape areas can be defined as follows;

Sittingbourne Industrial Commercial

- Large scale industrial development in flat topography adjoining The Swale
- Complex skyline of built forms contrasting with strong vertical elements of stacks, pylons and cranes
- Active, at times visually chaotic, townscape due to operations and construction activities
- Noisy environment with HGV traffic and strong odours
- Smaller scale light industrial and commercial development adjoining Milton Creek
- Rapidly changing and expanding character area with remnants of past industrial heritage
- Extensive urban fringe having striking contrast with the adjoining natural landscape of The Swale
- Linear tree belts and screens and blocks of scrub and woodland surrounding development
- Extensively lit during night time
- Stack emissions visible as plumes at times

12.4.41 The condition of the Sittingbourne Industrial Commercial character area is considered to be poor and the intrinsic sensitivity is low.

Sittingbourne Residential

- Central area of mainly 19th century terrace houses surrounding the commercial core
- Extensive 20th century residential estates extend out to the rural edge
- The A2 road and railway line cross the town centre as major transport corridors from east to west
- Church Marshes Country Park provides a large informal green space on the northern edge of housing

- Hedgerow remnants, street trees, designed green space and gardens comprise the majority of vegetation within the town

12.4.42 The condition of the Sittingbourne Residential character area is considered to be ordinary and the intrinsic sensitivity is medium

Kent Landscape Character Assessment

12.4.43 The Kent Landscape Character Assessment was prepared by Kent County Council in 2004. The study describes the rural landscapes of the county and provides a broader overview of character than the Swale Landscape Character and Biodiversity Appraisal Supplementary Planning Document. A brief summary of key character areas is included for completeness and to avoid repetition of information. The WKN Site lies within the Swale Marshes which are described as a remote, wild and isolated coastal marshland (See Figure 12.18). The assessment does not focus on urban areas, within which the WKN Site lies, although recognises the intrusive buildings of Ridham Dock and the very high visual sensitivity of the rural area. The neighbouring Eastern Swale Marshes have a similar character although industrial development is less apparent.

12.4.44 Much of the landscape in the local area to the south, south west and south east lies within either the Fruit Belt or Eastern Fruit Belt. These are rural landscapes of undulating landform including orchards and hops and sub-divided by shelter belts. The condition of the landscapes is often poor and visual sensitivity moderate.

Kent Historic Landscape Characterisation

12.4.45 The description of the historic environment is detailed within Chapter 13 of the Environmental Statement. The Historic Landscape Study is the study of the 'time depth' aspect of the landscape. The *Kent Historic Landscape Characterisation* (Kent County Council, 2001) recognises that "landscape is dynamic and constantly changing in a manner that reflects the immediate preoccupations, future aspirations and past activities of societies and individuals". *Historic landscape* characterisation identifies *"characteristic patterns of change and important relics of past change"*.

12.4.46 The WKN Site lies within Historic Landscape Character Area 17: Northern Horticultural Belt. Within this area the WKN Site lies within the Historic Landscape Type 12.4: Large Scale Industry. The character area is primarily defined by its horticultural activities, in particular fruit orchards. However, the industrial nature of the WKN Site is uncharacteristic of the overall character area. At paragraph 4.36 the report states *"Although primarily rural in nature, Kent has a considerable quantity of industrial areas, abandoned or otherwise, which account for 1.78% of the county's land surface. For the most part industrial activity tends to be confined to the areas adjacent to major urban centres, i.e. east of Maidstone, although significant groupings can also be found in the coastal areas"*. The WKN Site is associated with the extensive strip of industrial land uses which form the northern edge of the settlement of Sittingbourne where it adjoins The Swale.

Landscape Value

12.4.47 As part of the baseline description of the study area the value of the landscape or townscape that would be affected has been established. The NPPF states at paragraph 170 states that *'Planning policies and decisions should contribute to and enhance the natural and local environment by; protecting and enhancing valued landscapes' (in a manner commensurate with their statutory status or identified quality).*

12.4.48 GLVIA3 defines value as 'the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a whole variety of reasons. A review of existing landscape designations is usually the starting point to understanding landscape value, but the value attached to undesignated landscapes also needs to be carefully considered and individual elements of the landscape and individual elements of the landscape may also have value'.

12.4.49 GLVIA3 includes a list of eight factors within Box 5.1 that have been used to identify landscape/townscape value. I have used these factors in the following sections of this report to establish value.

- Landscape quality
- Scenic quality
- Rarity
- Representativeness
- Conservation interests
- Recreation value
- Perceptual aspects
- Associations

Landscape Quality

12.4.50 Landscape quality, or condition, measures the physical state of the landscape. It may include the extent to which typical character is represented in in individual areas, the intactness of the landscape and the condition of individual elements.

12.4.51 The condition of the landscape character areas defined in the *Swale Landscape Character and Biodiversity Appraisal Supplementary Planning Document* in September 2011, which are relevant to this assessment are included in the section above. The condition of the townscape areas of Sittingbourne are also described above. The Industrial/commercial character area has 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. The wider estuarine and coastal landscapes have a high value.

Scenic Quality

12.4.52 This measures the degree to which the landscape appeals to the visual senses. The visual baseline is analysed in more detail above.

12.4.53 The combination of a site that has been cleared of vegetation to accommodate temporary construction phase uses associated with K3 and the adjacent industrial complex results in a poor scenic quality and low value. However, the juxtaposition of the neighbouring industrial edge of Sittingbourne and open expanse of The Swale, Milton Creek and Isle of Sheppey create contrasting backdrops to the WKN Site and provide a transition in the local context to landscapes with a high value.

Rarity

12.4.54 This is concerned with the presence of rare features and elements in the landscape or the presence of a rare character type.

12.4.55 The poor quality townscape of the majority of the WKN Site is relatively typical of the urban fringe on the northern industrial edge of Sittingbourne and has a low value. However, when evaluated within the study area, this part of the WKN Site is not typical. The landscapes of The Swale are more unusual and have relative value in the context of the settlement. The extensive salt marshes and mudflats are relatively uncommon and important to the character of the area.

Representativeness

12.4.56 This analyses the features or elements within the WKN Site which are considered particularly important examples, which are worthy of retention.

12.4.57 There are no features within the WKN Site that require retention and that would add positively to the townscape character. The mudflats and maritime vegetation of The Swale are important and typical features of the coastal landscape and are highly valued.

Conservation Interests

12.4.58 This considers the presence of features of wildlife, earth science or archaeological or historical and cultural interest can add value to a landscape.

12.4.59 There are no conservation features of importance within the WKN Site or adjacent industrial areas. The estuarine habitat of The Swale is important for a wide range of flora and fauna and is designated in parts as a RAMSAR Site, National Nature Reserve, Special Protection Area, Site of Special Scientific Interest, MCZ and Environmentally Sensitive Area and as a high value.

Perceptual Aspects

12.4.60 A landscape may be valued for its perceptual qualities, notably wildness and/or tranquillity.

12.4.61 The nature of the active construction laydown area of the WKN Site is disturbed

and its character is heavily influenced by its location within the urban fringes of Sittingbourne. Consequently, this WKN Site cannot be defined as wild and precludes any sense of tranquillity and has a low value. However, the open water, mud flats and salt marshes of The Swale have a wild character and provide a strong contrast. This is a locally typical and highly valued landscape of north Kent. Large industrial buildings, lighting, visible plumes, construction activities and loud noises associated with the industrial area of Sittingbourne have an adverse influence over the Swale and influence the tranquillity of the landscape.

Associations

12.4.62 There is no specific cultural association with the WKN Site. The most significant historic and cultural influence within the local study area is The Swale as a transport corridor for Sittingbourne. The town, due to its location on this waterway, became an important port in the 19th century to transport goods to and from London. At the beginning of the 19th century the first sailing barges were designed and made in several locations along The Swale, the most significant being the Dolphin shipyard on Milton Creek. The brick and cement making industries and the fruit growers relied on the barges to transport produce to the markets of London. Following World War II there was a rapid decline in the barge building industry as road transport increased. Sailing barges are now an uncommon feature in the area, however commercial and leisure vessels continue to use The Swale.

12.4.63 During the 20th century the area became important as a producer of paper, particularly newsprint for Fleet Street. This industry continues to be important to the local community and the Kemsley Paper Mill forms the location for the WKN Proposed Development.

Sensitive Receptors

12.4.64 The sensitive receptors listed in Table 12.5 below have the potential to be affected by effects arising from the WKN Proposed Development. The assessment in this Chapter has considered the effects listed in the table upon the identified sensitive receptors.

Receptor	Importance/sensitivity/vulnerability to change
Landscape and Townscape Character	
Local landscape character areas (includes Special Landscape Area and Areas of High Landscape Value)	High to Medium
Local townscape character areas	Medium to Low
Visual Resources	
Walkers using the Saxon Shore Way long distance footpath beside The Swale and Milton Creek (includes public right of way ZU1)	High
Users of public open space at Church Marshes Country Park	High
Pedestrians using the pavements on Swale Way and Kings Ferry Bridge	Medium

Walkers using public footpaths at Elmley National Nature Reserve on the Isle of Sheppey	High
Occupiers of residential properties at Tonge Corner and Iwade	High
Occupiers of vehicles travelling on Swale Way and the A249	Medium
Occupiers of vessels on The Swale	Medium to Low
Employees within commercial and industrial premises on the northern edge of Sittingbourne	Low

Table 12.5: Potentially affected sensitive receptors

Sensitivity

12.4.65 The majority of the WKN Site is typical of the industrial and previously developed land within the urban fringes of the extensive industrial district of Sittingbourne. These areas of land, together with disused or derelict land and construction sites are often of poor visual quality. The WKN Site has a low sensitivity to change through redevelopment of this scale and nature.

12.5 Future baseline

12.5.1 The future baseline conditions that would potentially exist in 2023, when the WKN Proposed Development becomes operational, would potentially include cumulative schemes which have been granted a planning consent and are currently under construction or are under the control of Wheelabrator. This would only include K3, which in this case has been considered as part of the baseline. Therefore, no additional future baseline situation has been considered within this assessment.

12.6 WKN Predicted Effects

12.6.1 To enable effects to be predicted more accurately photomontages have been prepared to illustrate the likely change in landscape, townscape and visual resources based each of the 12 viewpoints. Each of the buildings and elements of infrastructure within the WKN Proposed Development have been modelled as maximum parameter, simple forms and coloured a neutral pale grey to indicate the scale, massing and location of the WKN Proposed Development within the surrounding context. A fully rendered representation of the completed K3 has been included within the baseline photography and photomontages to provide a more accurate representation of the baseline and completed WKN Proposed Development situations for assessment purposes. Photomontages are included at Figures 12.5 to 12.16.

Construction and Future Decommissioning Effects

12.6.2 The following section focuses on a description and assessment of construction effects on landscape, townscape and visual resources and the very similar

activities that would take place, in reverse, during the future decommissioning phase of the WKN Proposed Development. Whilst the construction and demolition effects are considered to be sufficiently similar to result in the same level and adverse nature of effect, there will ultimately be a beneficial effect on receptors when the WKN Proposed Development is completely removed.

Predicted Character Effects

12.6.3 Direct effects on townscape character relate to the Sittingbourne Industrial/Commercial Area, which has a poor to ordinary condition and local or low value. The character area's sensitivity to change through the effects of construction activities within the WKN Site would be low due to the similarity in the nature and scale of the proposed activities and the existing site conditions and neighbouring K1 CHP and K3 infrastructure. However, the construction activities would include cranes and high-level plant which would be slightly discordant in the industrial context. The direct effect of the large-scale construction works on the relatively open area of the WKN Site would create a small magnitude of change to the character, which would be adverse in nature, but only short term in duration. The overall significance of effect on the Sittingbourne Industrial/Commercial character area would be slight adverse in the day. The level of long-term effect on the character area following the demolition of the WKN Proposed Development would be slight beneficial.

12.6.4 Temporary lighting proposals would result in an extension of the existing well-lit site conditions provided by lighting columns at the WKN Site and the urban conditions on adjacent land during the construction phase. This would be within the well-lit context of the existing building and tower mounted lights and lighting columns within industrial areas and high-level mast mounted lights at Ridham Docks. There would be a negligible magnitude of change on a low sensitivity receptor and Kemsley Paper Mill. The significance of night-time effects on the Sittingbourne Industrial/Commercial Area character area would be negligible adverse. The level of long-term effect on the character area following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.5 The adjoining character area of Chetney and Greenborough Marshes forms the immediate landscape context to the WKN Site and is not directly affected by the construction activities. This character area is considered to be in good condition, has a high value and is of medium sensitivity to the indirect effects of the proposed demolition and construction activities. The nature and large scale of the construction works would be apparent as an intensification of baseline industrial site conditions and in the context of extensive industrial and post-industrial land uses. The negligible magnitude of change would result in indirect negligible adverse effects on the natural and wild elements of this character area during the daytime and at night. The level of long-term effect on the character area following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.6 The wider landscape of the Elmley Marshes, Elmley Island, Lower Halston Clay Farmlands, Iwade Arable Farmland, Teynham Fruit Belt, Luddenham and Conyer Marshes and South Sheppey Marshes and Mudflats, which have a poor to good

condition, medium to high value and a medium sensitivity due to the indirect nature of effects, provide context to the demolition and construction activities. The activities would be set on the edge of an existing industrial area and would have no direct effect on the valued aspects of these character areas. The existing extensive industrial development at Sittingbourne forms a backdrop to the character areas and is a characteristic element of the study area in North Kent. The magnitude of change would be negligible and adverse in the short term leading to a negligible adverse effect during the day and at night. The level of long-term effect on the character areas following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.7 The neighbouring townscape of the Sittingbourne Residential character area has an ordinary condition, low value and a low sensitivity to change through the influence of high-level construction activities of this nature within an industrial context. The magnitude of change would be negligible and adverse in the short term leading to a negligible adverse significance of effect during the day and at night. The level of long-term effect on the character area following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.8 At a national scale, direct effects on the landscape apply to the Greater Thames Estuary character area. The proposed construction and future demolition activities would directly affect the townscape of the industrial fringes of Sittingbourne which are of poor condition and would influence the natural landscapes of The Swale Marshes which are in good condition. Due to the large scale of the character areas within the study area and the relatively small scale of the WKN Site it would not be appropriate to assess effects at this national scale and therefore local level assessments are relied upon to define landscape and townscape character effects.

Landscape Designations

12.6.9 The AHLV Kent Level (North Kent Marshes SLA) designation coincides with character areas including the Chetney and Greenborough Marshes, Elmley Marshes, Luddenham and Conyer Marshes, South Sheppey Marshes and Mudflats and Elmley Island. A negligible adverse temporary effect has been identified for all of these character areas, during the day and at night. The AHLV (Swale Level) coincides with character areas including the Teynham Fruit Belt and Lower Halston Clay Farmlands which would experience a negligible adverse temporary effect, during the day and at night. The level of long-term effect on the designated landscapes following the demolition of the WKN Proposed Development would be negligible beneficial.

Historic Landscape Designations

12.6.10 The construction and future demolition activities associated with the WKN Proposed Development would be accommodated within the Large-Scale Industry Historic Landscape Type 12.4 without significant effects on key features or elements. The extensively industrial character area's sensitivity to change would be low due to the similarity in the nature of the proposals and the industrial context. There would temporarily be a small magnitude of change to the

character, which would be adverse in nature. The significance of effect on the historic landscape character type would be slight adverse in the day and at night. The level of long-term effect on the designated landscape following the demolition of the WKN Proposed Development would be slight beneficial.

Predicted Visual Effects

12.6.11 The zone of theoretical visibility (ZTV) for the existing WKN Site would be relatively similar to the proposed construction phase due to the presence of existing tall stacks at the K1 CHP and K3. The introduction of similar scale tall structures and buildings and cranes into a site partly contained by neighbouring industrial development would be slightly more visible although of similar character to the industrial surroundings. The activities associated with the construction of the stacks and tall buildings would be partially visible above the adjoining industrial developments which screen the majority of the existing WKN Site and activities. The ZTV would extend over similar areas of Sittingbourne to the south and south-west and over the wider landscape to the east and north-east of the WKN Site. High level construction activities would appear as a slight intensification of existing elements in views gained by all visual receptors identified at the baseline stage. No additional visual receptors would be affected.

12.6.12 Occupiers of residential properties at Kemsley on the edge of Sittingbourne to the south-west of the WKN Site and users of public open space at Church Marshes Country Park to the south would have glimpsed views through intervening industrial development of high-level construction activities. To the north-east, east and south of the WKN Site users of the Saxon Shore Way (public right of way ZU1) would continue to form the closest visual receptors. The significance of effect on these receptors and walkers using the rights of way network within the study area are dealt with in relation to specific viewpoint locations described below.

12.6.13 Views gained by occupants of vessels on The Swale to the east and north-east of the WKN Site and Milton Creek to the south would be towards the construction site and activities. Near to mid-distance views would be gained of high-level activities in the context of extensive industry on the urban fringe of Sittingbourne. A relatively small number of receptors would use the Swale for either leisure or commercial purposes and would range in sensitivity from medium to low. The magnitude of change would be negligible to small resulting in a negligible to slight adverse levels of effect, which is not significant. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible to slight beneficial.

12.6.14 Employees at industrial premises along the edge of Sittingbourne would be visual receptors of low sensitivity, some of which would be in relatively close proximity to the proposed WKN construction site and activities. Many views of the activities would be gained through and over intervening development of a similar character. The works would often only be partially visible as an intensification or extension of existing industry. The varying proximity of the construction activities would create a negligible to medium magnitude of change in view, leading to a negligible to slight adverse significance of effect, which is not significant. The

level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible to slight beneficial.

Viewpoint 1. Saxon Shore Way/Footpath ZU1, north of the WKN Site

12.6.15 Near open views gained by footpath users would include most elements of the construction activities. The activities would form an intensification of the existing infrastructure at K3 immediately beyond and K1 CHP and would appear within an urban fringe context comprising a combination of industry and natural habitats set beside the estuarine landscape of The Swale. Temporary lighting for night time working during the construction period would be seen in the context of existing light sources either on the Site or within the adjoining industrial district. The sensitivity of the receptor is high in this urban fringe context and the magnitude of change in the view would be small and temporary in nature, leading to a moderate adverse effect on views during the day and at night. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be moderate beneficial.

Viewpoint 2. Saxon Shore Way/Footpath ZU1, north-east of the WKN Site

12.6.16 Near views of high-level construction activities above the intervening palisade fence. Ground level activities would be largely obscured by the fence and landform. The activities would appear within the immediate context of existing buildings and infrastructure of K3 and stacks and lighting at the K1 CHP beyond. The sensitivity of the receptor is high and the magnitude of change in view would be small and temporary in nature, leading to a slight adverse effect on views, during the day and at night. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be slight beneficial.

Viewpoint 3. Saxon Shore Way/Footpath ZU1, south of the WKN Site

12.6.17 Near views of the proposed construction activities, visible above the effluent treatment works, would be visible between existing development at the K1 CHP and K3. The tops of buildings under construction would be visible and the stack and cranes, forming high level elements against the sky. The sensitivity of the receptor is high and the magnitude of change in view would be small and temporary in nature, leading to a slight adverse effect on views, during the day and at night. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be slight beneficial.

Viewpoint 4. Swale Way south-east of the WKN Site

12.6.18 Occupiers of vehicles and pedestrians using the roadside pavement would gain mid-distance largely obscured views of the WKN during construction from this transport corridor as it crosses the marshes. Only high-level construction activities and cranes would be visible above the Kemsley Paper Mill buildings. Lighting for night time working during the construction period would be seen in the context of existing light sources at the adjoining industrial district. The sensitivity of occupiers of vehicles is low and pedestrians is medium. The magnitude of change

in view for both sets of receptors would be negligible, temporarily leading to a negligible adverse effect on views, during the day and at night. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

Viewpoint 5. Church Marshes Country Park

12.6.19 Walkers and people engaged in leisure activities are receptors of high sensitivity within this open space which has a context of urban fringe and industrial townscapes and natural landscapes. These receptors would gain mid-distance filtered views over open space of high-level construction activities at the WKN Site, rising beyond existing development at Kemsley Paper Mill. High level lighting operated during the construction period would be seen in the context of existing light sources within the adjoining industrial district at night. The construction phase would result in a slight intensification of existing development on the skyline. The magnitude of change in view would be negligible resulting, temporarily, in a negligible adverse level of effect, during the day and at night. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

Viewpoint 6. Kemsley residential edge

12.6.20 Occupiers of residential properties on the edge of Kemsley would gain mid-distance views only of high-level construction activities within a context of extensive, existing industrial development. The activities would form a minor element within the view. The high sensitivity of the residential receptor and medium sensitivity of pedestrians in this urban fringe location and the negligible magnitude of change in view would result in a negligible adverse level of effect, in the short term. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.21 High level lighting for night time working during the construction period would temporarily be seen in the context of existing light sources within the intervening industrial townscape and road corridor. Lighting would be visible as a very minor intensification of surrounding conditions. The magnitude of change would be negligible, and the level of night time effects would be negligible adverse. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

Viewpoint 7. Saxon Shore Way/Footpath ZU2, east of the WKN Site

12.6.22 Walkers on the Saxon Shore Way would gain mid-distance open views of the WKN under construction as a slight intensification of the existing large-scale buildings at K3, Kemsley Paper Mill and stacks at the K1 CHP. K3 would obscure views of most of the WKN construction activities and the mound of the restored landfill site would screen some of the low-level site activities, however, the high-level construction of the buildings and stack would form a more visible element in the view. New light sources would be seen in the context of existing lighting within the adjoining industrial townscape and at the WKN Site. The receptors are of high sensitivity and the magnitude of change they would experience is small,

leading to a slight adverse level of effect, in the short term. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be slight beneficial.

Viewpoint 8. Iwade residential edge

12.6.23 Occupiers of residential properties on the edge of Iwade would gain mid-distance filtered views over farmland to a band of industrial and commercial development at Sittingbourne. The proposed construction activities would be visible against the backdrop of K3, within this urban area, as a slight intensification of the baseline conditions. Only high-level activities would be visible above surrounding development and vegetation. These receptors would be of high sensitivity and experience a negligible magnitude of change, in the winter only when intervening vegetation is not in leaf. The level of effect would be negligible adverse in the short term. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.24 Temporary lighting for night time working during the construction period would be seen in the context of existing light sources within surrounding industrial development and traffic on the A249. Proposed lighting would be a negligible intensification and extension to existing conditions resulting in a negligible adverse level of effect, in the short term. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

Viewpoint 9: Church Road at Tonge Corner (representative of views from residential properties)

12.6.25 Residents within properties at the hamlet of Tongue are receptors of high sensitivity and would have mid-distance views over arable farmland and solar farm of some high-level construction activities, partially visible K3 and beyond a strip of coastal vegetation and the restored landfill landform. The tops of some buildings under construction would be visible and the stack and cranes, forming high level elements in the view. Lighting required for night time works would be seen in the context of an existing well-lit industrial context. Receptors are of high sensitivity to the negligible magnitude of temporary change in view, resulting in a negligible adverse effect on views, during the day and at night. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

Viewpoint 10: Elmley Marshes Nature Reserve, public right of way

12.6.26 Visitors to the Nature Reserve would gain mid-distance open views from the footpath on the Isle of Sheppey. The WKN Proposed Development construction activities would be seen immediately adjacent to the large-scale buildings of K3 and as part of the urban fringe of Sittingbourne beyond the foreground of open grassland. Most elements of the construction works would be visible, including low level activities. The high sensitivity of the receptor in this rural location and the small magnitude of the temporary change would lead to a slight adverse level of effect during the day and at night. The level of long term effect on visual

receptors following the demolition of the WKN Proposed Development would be slight beneficial.

Viewpoint 11. Kings Ferry Bridge

12.6.27 Pedestrians on the footway of the bridge over The Swale are medium sensitivity receptors who would gain mid-distance open views over the estuary landscape from this elevated location. The construction activities at the WKN site would be barely perceptible within the context of extensive industrial development at Sittingbourne. The activities would form an intensification of the baseline conditions near K3. The activities would be less prominent than other existing sites, such as Ridham Docks and the numerous pylons. The magnitude of change would be negligible and temporary in nature, resulting in a negligible adverse level of effect. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.28 Proposed lighting for night time working during the construction period would be visible in the context of existing light sources within the surrounding industrial townscape. Lighting would temporarily result in an intensification of on-site and surrounding conditions. The level of night time effects would be minor adverse. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be slight beneficial.

Viewpoint 12. Furze Hill, public right of way

12.6.29 Distant open views gained by walkers from this rural footpath on high ground on the Isle of Sheppey would focus on the industrial fringes of Sittingbourne and the bridges over The Swale. The construction activities at the WKN Site would be barely distinguishable from the extensive townscape setting. The receptors are of high sensitivity and would experience a negligible magnitude of change in view which would be temporary in nature, resulting in a negligible adverse level of effect, due to the distance from, extent and temporary nature of the effects. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

12.6.30 Additional lighting for night time working during the construction period would be seen in the context of existing light sources within adjoining industrial development and at road junctions. Proposed lighting would be a temporary intensification of existing conditions resulting in a negligible adverse level of effect. The level of long-term effect on visual receptors following the demolition of the WKN Proposed Development would be negligible beneficial.

Completed Development Effects

Predicted Character Effects

12.6.31 Direct effects on townscape character relate to the Sittingbourne Industrial/Commercial Area, which has a poor to ordinary condition and local or low value. Although the scale of the WKN Proposed Development is large, within the context of this extensive industrial area of Sittingbourne it is relatively

modest. The WKN Proposed Development could be accommodated within this character area without significant effects on key features or elements. The character area's sensitivity to change through the effects of the development of the WKN Site would be low due to the similarity in the nature and scale of the proposals and the existing site conditions, neighbouring K3 and K1 CHP infrastructure. The direct effect of the WKN Proposed Development on the WKN Site would create a small magnitude of change to the character, which would be adverse in nature in the long term. The overall significance of effect on the Sittingbourne Industrial/Commercial character area would be slight adverse in the day.

12.6.32 Lighting proposals are likely to include approximately 30 luminaires mounted on 6 or 8m high columns and 13 building mounted luminaires. The proposals would extend the existing well-lit conditions provided by lighting columns on adjacent industrial land at Kemsley Paper Mill into what is essentially an unlit site. This would be within the wider context of the existing building and tower mounted lights and lighting columns within industrial areas north of Sittingbourne and high-level mast mounted lights at Ridham Docks. The lighting at the WKN Site would not change the existing character of the area, particularly given the measures adopted to ensure lighting is directional and that spillage is therefore controlled as far as practicable. There would be a negligible magnitude of change on a low sensitivity receptor. The significance of night-time effects on the existing and future baseline situation of the Sittingbourne Industrial/Commercial Area character area would be negligible adverse in the long term.

12.6.33 The adjoining character area of Chetney and Greenborough Marshes forms the immediate landscape context to the WKN Site and is not directly affected by the WKN Proposed Development. This character area is considered to be in good condition, has a high value and is of medium sensitivity to the indirect effects of the proposals. The large scale of the WKN Proposed Developmen,t and the lighting at night, would be apparent as an intensification of baseline conditions in the context of similar infrastructure at the K1 CHP and K3, the wider industrial townscape at Kemsley and the existing and future baseline conditions at the K3 and WKN sites. The negligible magnitude of change would result in indirect slight effects on the natural and wild elements of this character area during the daytime and at night.

12.6.34 The wider landscape of the Elmley Marshes, Elmley Island, Lower Halston Clay Farmlands, Iwade Arable Farmland, Teynham Fruit Belt, Luddenham and Conyer Marshes and South Sheppey Marshes and Mudflats, which have a poor to good condition, medium to high value and a medium sensitivity to the indirect effects, provide context to the WKN Proposed Development. The WKN Proposed Development would be set on the edge of an existing industrial area and would have no direct effect on the valued aspects of these character areas. The existing extensive industrial development at Sittingbourne forms a backdrop to the character areas and is a characteristic element of the study area in North Kent. The magnitude of change would be negligible and adverse in the long term leading to a slight significance of effect during the day and at night.

12.6.35 The neighbouring townscape of the Sittingbourne Residential character area has

an ordinary condition, low value and a low sensitivity to change through the influence of a stack within an industrial context which contains many stacks. The magnitude of change would be negligible and adverse in the long term leading to a negligible significance of effect during the day and at night.

Landscape designations

12.6.36 The AHLV Kent Level (North Kent Marshes SLA) designation coincides with character areas including the Chetney and Greenborough Marshes, Elmley Marshes, Luddenham and Conyer Marshes, South Sheppey Marshes and Mudflats and Elmley Island. A slight adverse effect has been identified for all of these character areas. The AHLV (Swale Level) coincides with character areas including the Teynham Fruit Belt and Lower Halston Clay Farmlands which would experience a slight adverse effect.

Historic Landscape Character

12.6.37 The Kent Historic Landscape Characterisation locates the WKN Site within the Historic Landscape Type 12.4: Large Scale Industry which forms part of the wider Northern Horticultural Belt character area. This is a dynamic, constantly changing and extensive strip of well-lit industrial land on the northern, coastal edge of Sittingbourne. Direct effects on the character type would occur through the development of a large-scale energy facility within the context of industrial development. The WKN Proposed Development would be accommodated without significant effects on historic features or elements. The character area's sensitivity to change would be low due to the similarity in the nature of the proposals and the neighbouring K3 and K1 CHP infrastructure and wider industrial context. There would be a small magnitude of change to the character, which would be adverse in nature in the long term. The overall significance of effect on the historic landscape character type would be slight adverse in the day and at night.

Predicted Visual Effects

12.6.38 The operational phase ZTV's for the WKN Proposed Development would extend over the same area as the construction phase ZTV's (See Figure 12.1 Rev. A and 12.4 Rev. A).

12.6.39 Users of the Saxon Shore Way (ZU1) immediately to the east and north-east of the WKN Site would continue to form the closest visual receptors within public locations to the WKN Site, with the ability to gain views of some aspects of the WKN Proposed Development. Occupiers of residential properties at Kemsley to the west and south-west of the WKN Proposed Development and users of public open space at Church Marshes Country Park to the south-west would have glimpsed views through intervening industry of the tops of buildings and stack at the WKN Proposed Development. The significance of effect on these receptors is dealt with in relation to specific viewpoint locations described below.

12.6.40 Views gained by occupants of vessels within the relatively wild coastal locations of The Swale to the east and north-east of the WKN Site and Milton Creek to the

south would include the WKN Proposed Development located beside the existing K3 and K1 CHP. Near to mid-distance views would be gained of the stack and the tops of tall buildings within the WKN Site, in the wider context of extensive industry on the urban fringe of Sittingbourne. The landfill landform would obscure many views from the south. A relatively small number of receptors would use the Swale for either leisure or commercial purposes and would range in sensitivity from medium to low. The magnitude of change would be negligible to small resulting in a negligible to slight adverse levels of effect in the long term, which is not significant.

12.6.41 Employees at industrial premises along the edge of Sittingbourne, including primarily Kemsley and premises north of Swale Way, would be visual receptors of low sensitivity and form the largest group of receptors in close proximity to the WKN Proposed Development. Most views of the WKN Proposed Development from Kemsley would be gained through intervening development of a similar character with a backdrop including K3 and Kemsley Paper Mill. Views from north of Swale Way extend across a more open landscape of the Milton Creek. The WKN Proposed Development would be seen as a minor intensification or extension of existing industry, including light sources at night. The varying proximity of the WKN Proposed Development would create a negligible to medium magnitude of change in view, leading to a negligible to slight adverse significance of effect, which is not significant.

Viewpoints

Viewpoint 1 Saxon Shore Way/Footpath ZU1, north of the WKN Site

12.6.42 Receptors walking south on the long-distance path would gain near open views of the majority of buildings and infrastructure of the WKN Proposed Development immediately in front of K3. The similarity in the nature and scale of the two schemes would reduce the degree of perceptible change in view, allowing the facilities to be viewed as a single entity within an immediate context of further industrial development at the Kemsley Paper Mill site. The WKN Proposed Development would form an intensification of the existing industrial conditions within an urban fringe context and a foreground of the Swale channel. New column and building mounted lighting would be seen in the context of existing light sources either on the WKN Site or within the adjoining industrial district. The sensitivity of the receptor is high in this urban fringe context and the magnitude of change in view would be small, resulting in a moderate adverse effect on views during the day and at night, in the long term.

Viewpoint 2 Saxon Shore Way/Footpath ZU1, north-east of the WKN Site

12.6.43 Near views of buildings on the eastern side of the WKN Proposed Development would form a prominent, although locally characteristic new element of industrial development immediately adjacent to the large scale K3 on the left side of the view. The tops of buildings and stack would be visible above the intervening palisade fence. Ground level development and activities would be largely obscured by the fence and landform of the landscape proposals. The sensitivity of the receptor is high and the magnitude of change in view would be small,

leading to a slight adverse effect on views, during the day and at night, in the long term.

Viewpoint 3 Saxon Shore Way/Footpath ZU1, south of the WKN Site

12.6.44 Open views across the natural landscape of the Milton Creek estuary focus on the industrial development at K3 and Kemsley Paper Mill. New buildings and infrastructure within the WKN Proposed Development would be visible above coastal vegetation and the effluent treatment works and immediately beyond K3. The tops of taller buildings and the stack would be clearly visible, replicating the scale and form of existing infrastructure, slightly increasing the intensity of industrial development in the view, whilst maintaining the character of the view. Any new light sources mounted on columns or buildings would be seen in the context of an existing well-lit industrial context. Walkers would have a high sensitivity to the small magnitude of change in view, resulting in a slight adverse effect in the long term, during the day and at night.

Viewpoint 4 Swale Way south-east of the WKN Site

12.6.45 Occupiers of vehicles and pedestrians using the roadside pavement would gain mid-distance largely obscured views of the WKN Proposed Development from this transport corridor within the Church Marshes Country Park. Only the top of the stack would be visible rising above intervening buildings as DS Smith, within the context of six existing stacks. There would be a barely perceptible change in the view and no change in the character of the view. New light sources would be seen in the context of existing light sources at the WKN Site and within the adjoining industrial district. The sensitivity of occupiers of vehicles is low and the magnitude of change in view would be negligible, resulting in a negligible adverse effect on views, during the day and at night. Pedestrians are of medium sensitivity and would also experience a negligible magnitude of change, leading to a negligible adverse level of effect, during the day and at night.

Viewpoint 5 Church Marshes Country Park

12.6.46 The top of the new stack at the WKN Proposed Development would be the only visible element of the proposals in views gained by walkers and people engaged in leisure activities within the country park. Intervening industrial development would obscure all other aspects of the WKN Proposed Development. The increase in the density of the cluster of stacks would be barely perceptible and the character of the view would remain the same. Any high-level, column mounted lighting would be seen in the context of existing light sources within the adjoining industrial district at night. High sensitivity receptors would experience a negligible magnitude of change in view, resulting in a negligible adverse level of effect, during the day and at night.

Viewpoint 6 Kemsley Residential edge

12.6.47 The top of the new stack at the WKN Proposed Development would be the only visible element of the proposals in views gained by walkers and occupiers of residential properties. Intervening commercial and industrial development would

obscure all other aspects of the WKN Proposed Development. The increase in the number of stacks in the view would be barely perceptible and the character of the view would remain the same. Any high-level, column mounted lighting would be seen in the context of existing light sources within the adjoining and foreground industrial districts at night. High sensitivity residential receptors and medium sensitivity pedestrians would experience a negligible magnitude of change in view, resulting in a negligible adverse level of effect, during the day and at night.

Viewpoint 7 Saxon Shore Way/Footpath ZU2, east of the WKN Site

12.6.48 Receptors walking west on this long-distance path would gain mid-distance open views of the WKN Proposed Development immediately beyond K3. The two facilities would be similar in terms of scale, massing, form and materials forming a logical replication of development and an intensification of the existing large-scale industrial buildings at Kemsley. The mound of the restored landfill site would screen some of the base of the buildings and low-level infrastructure. The balance of industrial townscape and wild coastal landscape would not be considerably changed. New light sources would be seen in the context of existing lighting within the adjoining industrial townscape and at the WKN Site. The receptors are of high sensitivity and the magnitude of change they would experience is small, leading to a slight adverse level of effect in the day and at night, in the long term.

Viewpoint 8 Iwade residential edge

12.6.49 Occupiers of residential properties on the edge of Iwade would gain mid-distance filtered views over farmland to the WKN Proposed Development, located immediately in front of the existing K3. The proposal would replace views of a similar scale and type of facility within a band of industrial and commercial development at Sittingbourne. In summer when vegetation is in leaf the WKN Proposed Development is likely to be barely perceptible. Lighting would be seen in the context of existing light sources at Kemsley and in place of any lighting at K3 within surrounding industrial development and traffic on the A249. These receptors would be of high sensitivity and experience a negligible magnitude of change, in the winter only. The level of effect would be negligible adverse in the long term.

Viewpoint 9 Church Road at Tonge Corner (representative of views from residential properties)

12.6.50 Occupiers of residential properties at Tongue are receptors of high sensitivity and would gain mid-distance views over a largely rural landscape of the tops of tall buildings immediately beyond K3 and a foreground of coastal vegetation and the effluent treatment works. The proposals would replicate the scale and form of K3 and would not be immediately discernible from the development in front. Column and building mounted lighting at the WKN Proposed Development would be seen in the context of an existing well-lit industrial context at Kemsley and Ridham Docks to the right of the view. Receptors are of high sensitivity to the negligible magnitude of change in view, resulting in a negligible adverse effect

on views, during the day and at night.

Viewpoint 10 Elmley Marshes Nature Reserve, public right of way

12.6.51 Mid-distance views from this elevated location within the nature reserve on the Isle of Sheppey would extend across stark grassland and marshes of the industrial edge of Sittingbourne. The buildings and infrastructure, including lighting, of the WKN Proposed Development would be visible immediately to the right of K3. The two facilities would be similar in terms of scale, massing, form and materials forming a logical replication of development and an intensification of the existing large-scale industrial buildings at Kemsley and well-lit night time character. The nature and character of the view would not be considerably changed. The high sensitivity of walkers in this location and the small magnitude of the change would lead to a slight adverse level of effect during the day and at night.

Viewpoint 11 King's Ferry Bridge

12.6.52 Pedestrians on the footway of the bridge over The Swale are medium sensitivity receptors who would gain mid-distance open views over the estuary landscape from this elevated location. The WKN Proposed Development would be partially visible beyond intervening large scale industrial development and immediately in front of K3. The proposal would be visible within the existing extensive industrial district of Sittingbourne and as an intensification of the existing situation. The WKN Proposed Development would be barely perceptible and would not change the character of the view. Proposed lighting would be visible in the context of existing similar, although more extensive light sources at Kemsley and Ridham Docks and the wider industrial townscape. There would be a barely discernible intensification of existing conditions. The magnitude of change would be negligible, resulting in a negligible adverse level of effect, during the day and at night.

Viewpoint 12 Furze Hill, public right of way

12.6.53 Distant open views gained by walkers from this rural footpath on high ground on the Isle of Sheppey would focus on the industrial fringes of Sittingbourne and the bridges over The Swale. The WKN Proposed Development would be barely distinguishable from the extensive townscape setting. The buildings and infrastructure would be partially obscured by intervening industrial development at Ridham Docks and would lie immediately in front of K3. New lighting would be seen in the context of the extensive, existing light sources at Sittingbourne and the industrial sites along the Swale. There would be a barely discernible intensification of existing conditions within the landscape. The receptors are of high sensitivity and would experience a negligible magnitude of change in view, resulting in a negligible adverse level of effect, during the daytime and at night.

Sequential Visual Effects

12.6.54 Walkers using the Saxon Shore Way would experience a sequence of views that would include a more heavily developed cluster of energy infrastructure at Kemsley Paper Mill, at some locations, within a journey between Milton Creek

and Ridham Docks. The assessment of individual viewpoints above concludes that there would be either a moderate, slight or negligible effect on receptors at each individual location, which is not significant. Moderate adverse effects would be experienced by walkers using a relatively short section of the Saxon Shore Way located to the north of the WKN Site. As a result, the combined sequential effects on walkers is not considered sufficiently adverse to constitute a significant sequential visual effect.

12.6.55 Table 12.6 below provides a summary of all effects on landscape and townscape character and visual receptors.

Effect Identified	Receptor Sensitivity	Impact Magnitude	Nature	Duration	Degree of Effect
Construction/Demolition Effects of WKN Proposed Development					
Sittingbourne: Industrial/Commercial. Daytime and night time effect on townscape character.	Low	Small to Negligible	Direct, Adverse	Short term	Slight to Negligible
Sittingbourne: Residential. Daytime and night time effect on townscape character.	Low	Negligible	Indirect, Adverse	Short term	Negligible
Chetney and Greenborough Marshes. Daytime and night time effect on landscape character (including SLA & AHLV Kent level).	Medium	Negligible	Indirect, Adverse	Short term	Negligible
Elmley Marshes. Daytime and night time effect on landscape character (including SLA & AHLV Kent level).	Medium	Negligible	Indirect, Adverse	Short term	Negligible
Elmley Island. Daytime and night time effect on landscape character (including SLA & AHLV Kent level).	Medium	Negligible	Indirect, Adverse	Short term	Negligible
South Sheppey Marshes and Mudflats. Daytime and night time effect on landscape character (including SLA & AHLV Kent level Short term).	Medium	Negligible	Indirect, Adverse	Short term	Negligible
Lower Halstow Clay Farmlands. Daytime and night time effect on landscape character (including AHLV Swale level).	Medium	Negligible	Indirect, Adverse	Short term	Negligible
Iwade Arable Farmlands. Daytime and night time effect on landscape character.	Medium	Negligible	Indirect, Adverse	Short term	Negligible

Teynham Fruit Belt. Daytime and night time effect on landscape character (including AHLV Swale level)	Medium	Negligible	Indirect, Adverse	Short term	Negligible
Luddeham and Conyer Marshes. Daytime and night time effects on landscape character. (including SLA & AHLV Kent level).	Medium	Negligible	Indirect, Adverse	Short term	Negligible
Walkers using the Saxon Shore Way long distance path. Daytime and night time effects on view. (Viewpoints 1, 2, 3 and 7).	High	Small to Negligible depending on proximity	Direct, Adverse	Short term	Slight to Negligible
Walkers using public right of way at Furze Hill. Daytime and night time effects on view. (Viewpoint 12).	High	Negligible	Direct, Adverse	Short term	Negligible
People using open space at Church Marshes Country Park. Daytime and night time effects on views. (Viewpoint 5).	High	Negligible	Direct, Adverse	Short term	Negligible
Occupiers of residential properties at Kemsley. Daytime and night time effects on views. (Viewpoint 6).	High	Negligible	Direct, Adverse	Short term	Negligible
Occupiers of residential properties at Iwade. Daytime and night time effects on views. (Viewpoint 8).	High	Negligible	Direct, Adverse	Short term	Negligible
Occupiers of residential properties at Tonge Corner. Daytime and night time effects on views. (Viewpoint 9).	High	Negligible	Direct, Adverse	Short term	Negligible
People using open space at Elmley Marshes Nature Reserve. Daytime and night time effects on views. (Viewpoint 10).	High	Small	Direct, Adverse	Short term	Slight
Pedestrians using roadside footway on Swale Way and King's Ferry Bridge. Daytime and night time effects on views. (Viewpoints 4 and 11).	Medium	Negligible	Direct, Adverse	Short term	Negligible

Occupants of vessels on the Swale. Daytime and night time effects on view.	Medium to Low	Small to Negligible	Direct, Adverse	Short term	Slight to Negligible
Occupiers of vehicles using Swale Way. Daytime and night time effects on views (Viewpoint 4).	Low	Negligible	Direct, Adverse	Short term	Negligible
Employees within industrial premises at Kemsley. Daytime and night	Low	Medium to Negligible	Direct, Adverse	Short term	Slight to Negligible
Completed Development Effects of WKN Proposed Development					
Sittingbourne: Industrial/Commercial. Daytime and night time effect on townscape character.	Low	Small to Negligible	Direct, Adverse	Long term	Slight to Negligible
Sittingbourne: Residential. Daytime and night time effect on townscape character.	Low	Negligible	Indirect, Adverse	Long term	Negligible
Chetney and Greenborough Marshes. Daytime and night time effect on landscape character (including SLA & AHLV Kent level).	Medium	Negligible	Indirect, Adverse	Long term	Negligible
Elmley Marshes. Daytime and night time effect on landscape character (including SLA & AHLV Kent level).	Medium	Negligible	Indirect, Adverse	Long term	Negligible
South Sheppey Marshes and Mudflats. Daytime and night time effect on landscape character (including SLA & AHLV Kent level Short term).	Medium	Negligible	Indirect, Adverse	Long term	Negligible
Lower Halstow Clay Farmlands. Daytime and night time effect on landscape character (including AHLV Swale level).	Medium	Negligible	Indirect, Adverse	Long term	Negligible
Iwade Arable Farmlands. Daytime and night time effect on landscape character.	Medium	Negligible	Indirect, Adverse	Long term	Negligible
Teynham Fruit Belt. Daytime and night time effect on landscape character (including AHLV Swale level)	Medium	Negligible	Indirect, Adverse	Long term	Negligible
Luddeham and Conyer Marshes. Daytime and	Medium	Negligible	Indirect, Adverse	Long term	Negligible

night time effects on landscape character. (including SLA & AHLV Kent level).					
Walkers using the Saxon Shore Way long distance path. Daytime and night time effects on view. (Viewpoints 1, 2, 3 and 7).	High	Small	Direct, Adverse	Long term	Moderate to Slight
Walkers using public right of way at Furze Hill. Daytime and night time effects on view. (Viewpoint 12).	High	Negligible	Direct, Adverse	Long term	Negligible
People using open space at Church Marshes Country Park. Daytime and night time effects on views. (Viewpoint 5).	High	Negligible	Direct, Adverse	Long term	Negligible
Occupiers of residential properties at Kemsley. Daytime and night time effects on views. (Viewpoint 6).	High	Negligible	Direct, Adverse	Long term	Negligible
Occupiers of residential properties at Iwade. Daytime and night time effects on views. (Viewpoint 8).	High	Negligible	Direct, Adverse	Long term	Negligible
Occupiers of residential properties at Tonge Corner. Daytime and night time effects on views. (Viewpoint 9).	High	Negligible	Direct, Adverse	Long term	Negligible
People using open space at Elmley Marshes Nature Reserve. Daytime and night time effects on views. (Viewpoint 10).	High	Small	Direct, Adverse	Long term	Slight
Pedestrians using roadside footway on Swale Way and King's Ferry Bridge. Daytime and night time effects on views. (Viewpoints 4 and 11).	Medium	Negligible	Direct, Adverse	Long term	Negligible
Occupants of vessels on the Swale. Daytime and night time effects on view.	Medium to Low	Small to Negligible	Direct, Adverse	Long term	Slight to Negligible
Occupiers of vehicles using Swale Way. Daytime and night time	Low	Negligible	Direct, Adverse	Long term	Negligible

effects on views (Viewpoint 4).					
Employees within industrial premises at Kemsley. Daytime and night.	Low	Medium to Negligible	Direct, Adverse	Long term	Slight to Negligible

Table 12. 6 – Summary of Effects Prior to Mitigation

12.7 Mitigation

12.7.1 The mitigation of effects on landscape, townscape and visual resources is generally achieved through the following two methods;

- The provision of hard and soft landscape proposals to enhance the scheme and to screen it in views from neighbouring areas and the wider landscape
- The design of the built environment and infrastructure to minimise the scale and massing of development, the appropriate use of form, surface materials and colours and the use of an appropriate lighting strategy

12.7.2 Landscape proposals would form an integral part of the WKN Proposed Development to provide treatments for the perimeter and internal green spaces. A detailed landscape proposal scheme does not form part of the DCO application but will be secured by way of a Requirement 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. The objective of the landscape proposals will be to provide a scheme that is;

- An attractive working environment for employees that is practical and fit for purpose
- Integrated with the landscape of The Swale, reflecting aspects of local landscape character and setting
- Uncluttered to allow easy access and flow around the WKN Site
- Integrated into the landscape and townscape in views from receptors both locally and at distance

12.7.3 The landscape treatments at the eastern end of the WKN Site would work in conjunction with the flood attenuation pond. Species rich native grassland would be established over the majority of the landscape areas combined with areas of native shrub mixes. Species would include goat willow (Salix caprea), field maple (Acer campestre), hazel (Corylus avellana), hawthorn (Crataegus monogyna) and blackthorn (Prunus spinosa) and dog rose (Rosa canina) in an open mosaic habitat. The planting treatments would combine to form an intermittent visual screen of vegetation when viewed from surrounding receptors. The base of development, including site activities, would be partly concealed when the planting becomes established, whilst the upper portions of the WKN Proposed

Development would remain visible. The inner edge of the pond would be planted with marginal plant species to provide visual and ecological diversity.

12.7.4 Internal green spaces within the WKN Site would receive a simple treatment of grassland and flora with clumps of native shrub species. The landscape proposals would provide an attractive setting for the WKN Proposed Development, valuable habitats for wildlife and a means to soften the urban edge adjoining The Swale and merge development with the townscape of Sittingbourne in views from the surrounding landscape.

12.7.5 The architectural form of the WKN Proposed Development is largely dictated by its function. The stack height and diameter, the buildings scale and mass and the arrangement of infrastructure to achieve the energy generation process are determined through an iterative engineer lead design process. Maximum parameters have been identified for all elements of infrastructure. The photomontages within the submitted ES illustrate a 58 m high maximum parameter building and the building ZTV has been recalculated to reflect this height and is illustrated in Figures 12.1 Rev. A and 12.4 Rev. A. A lighting assessment has been undertaken to determine the likely type, number and location of luminaires Detailed design of the WKN Proposed Development will take place following the DCO process.

12.7.6 No further landscape mitigation is proposed.

12.8 Residual Effects

12.8.1 Residual effects are those that are predicted to remain after implementation of any secondary mitigation measures. No significant residual effects have been identified.

12.9 Cumulative Effects

12.9.1 The significance of cumulative effects on the existing landscape and townscape character and visual resources of the WKN Proposed Development with other schemes that are operational/constructed, consented or for which planning permissions are currently being sought have been assessed and are illustrated in Figures 3.2a and b of Chapter 3 of this ES. For the purposes of this cumulative assessment K3 has been considered in two stages. Firstly K3 as consented, has been defined as an existing element of the baseline situation. In this scenario K3 has been scoped out of the assessment, as described within the introduction at paragraph 12.1.1. as there are no changes to K3 resultant from the practical effect of the K3 Proposed Development to the layout or appearance of K3 as consented and therefore is no potential for significant cumulative effects. The cumulative effects of the WKN Proposed Development with other proposed or permitted developments only is therefore considered in this scenario. In the second cumulative scenario the K3 Proposed Development together with the WKN Proposed Development has been assessed in combination with the proposed or permitted cumulative schemes. The cumulative schemes which are considered within this chapter are shown below in Table 12.7 and lie

predominantly within a 3 km radius of the WKN Site.

12.9.2 Schemes within a 3 km radius of the K3/WKN Site which have not been considered within this chapter of the ES include residential developments located within the urban townscape of Sittingbourne and west of Sittingbourne and the extension to the HGV yard west of the Kemsley Paper Mill and A1 allocation for B class employment uses. There would be no direct cumulative effect on the Sittingbourne Industrial and Commercial townscape character area as these developments are located outside of this character area. There would also be very limited or no intervisibility with most buildings and infrastructure at the WKN Proposed Development and therefore no opportunity for significant adverse effects on visual receptors.

12.9.3 Only two of the 14 cumulative schemes within a 3 km to 10 km radius of the K3/WKN Site have been assessed within this chapter of the ES. These include a wind farm and an anaerobic digester, which both include tall structures which would have the greatest intervisibility. The other cumulative schemes are located at distances and in locations that would preclude any likely significant effects on landscape or townscape character or visual amenity.

Cumulative Developments	Landscape/Townscape Character Area
16/501228/FULL Kemsley Mill baling plant	Sittingbourne Industrial/Commercial
18/502489/FULL Kemsley Paper Mill southern boundary road	Sittingbourne Industrial/Commercial
EN010090 (18/501923/ADJ) Decommissioning of K1 and rebuild K4 CHP	Sittingbourne Industrial/Commercial
SW/11/1291 Land north of DS Smith Paper Mill anaerobic digester and associated ground profiling and landscaping	Sittingbourne Industrial/Commercial
16/501484/COUNTY Countrystyle Recycling gypsum recycling plant	Sittingbourne Industrial/Commercial
17/504034/COUNTY Countrystyle Recycling gypsum recycling plant car park and drainage	Sittingbourne Industrial/Commercial
SW/14/0191 Countrystyle Recycling gypsum recycling plant extension HGV shed	Sittingbourne Industrial/Commercial
SW/14/0224 Solar Farm north west of Tonge Corner Farm	Teynham Fruit Belt
18/503873/ENVSCR Land east of Iwade Residential Development (A17 allocation Iwade expansion)	Iwade Arable Farmland
16/506193/ENVSCR Land west of Iwade Residential Development up to 275 dwellings	Iwade Arable Farmland
15/500348/COUNTY Advance thermal conversion energy project	Iwade Arable Farmland
16/506014 Sustainable urban extension north-west of Sittingbourne up to 1,100 dwellings	Iwade Arable Farmland
18/500257 North-west of Sittingbourne 155 dwellings	Iwade Arable Farmland
14/500327/OUT Land south of Kemsley Mill up to 8,000m2 of class B1 and B2 and country park	Chetney and Greenborough Marshes/Teynham Fruit Belt

Cumulative Developments	Landscape/Townscape Character Area
15/510/589/OUT Land east of Sittingbourne Business Park (MU2 allocation mixed use)	Teynham Fruit Belt
SW/13/1495 Ridham Dock Materials Recycling Facility (MRF) and waste transfer station	Sittingbourne Industrial/Commercial
14/501181/COUNTY Ridham Dock combined heat and energy plant	Sittingbourne Industrial/Commercial
16/506935/COUNTY Ridham Dock Kemsley Mill steam pipeline	Sittingbourne Industrial/Commercial
17/505919/COUNTY and 17/502678/COUNTY Ballast Phoenix Ltd.	Sittingbourne Industrial/Commercial
17/505073/FULL Tile factory service yard, storage yard and parking	Luddenham and Conyer Marshes
18/500393/FULL Sittingbourne natural gas reserve power plant	Luddenham and Conyer Marshes
16/507943/FULL Anaerobic digester	Central Sheppey Farmlands
SW/13/1571 Wind Farm at Eastchurch	Central Sheppey Farmlands
A1 Land allocated for B1 employment uses	Sittingbourne Industrial/Commercial and Residential

Table 12.7: Cumulative Developments and Landscape and Townscape Character Areas

Cumulative Effects on Landscape and Townscape Character within a 3km radius

12.9.4 The WKN Proposed Development and the cumulative developments generally lie within the same urban character type comprising the Sittingbourne Industrial/Commercial townscape character area. The existing Kemsley Paper Mill complex, MVV Biomass Power Plant, Knauf building and Ridham Dock developments together with 12 of the cumulative schemes would form a more developed context into which the WKN Proposed Development would be placed. The industrial and commercial characteristics of the northern part of Sittingbourne adjoining the Swale would be intensified within this townscape character area as a result of the addition of the 12 schemes and the WKN Proposed Development however, the intrinsic character and qualities of the area would remain the same. The condition of the character area would remain poor or ordinary and the sensitivity would be low. The cumulative schemes, together with the WKN Proposed Development would result in a medium magnitude of change, leading to a slight adverse level of cumulative townscape effect in the day, which is not significant. The WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.9.5 When considered in combination the K3 and WKN Proposed Developments and many of the relevant cumulative developments lie within the same urban character type comprising the Sittingbourne Industrial/Commercial townscape character area. The existing characteristics of the townscape would be intensified as a result of the addition of cumulative industrial/commercial schemes and the large scale K3 and WKN Proposed Developments. There would be a medium magnitude of change, leading to a slight adverse level of cumulative townscape

effect in the day and at night. The K3 and WKN Proposed Developments, due to their greater combined scale, would make a slight contribution to this cumulative effect.

12.9.6 At night the additional light sources at the 12 cumulative developments together with the WKN Proposed Development, within the Sittingbourne Industrial/Commercial townscape character area would create a more intensely lit urban townscape. The cumulative night time effects that would occur would have a negligible magnitude of impact on a low sensitivity receptor, resulting in a negligible adverse level of effect in the long term.

12.9.7 The night time cumulative effects of the 12 cumulative developments together with the K3 and WKN Proposed Development, within the Sittingbourne Industrial/Commercial townscape character area would create a negligible adverse level of effect in the long term.

12.9.8 The large cumulative business developments south of Kemsley Paper Mill and east of Murston would lie wholly or partly within the Chetney and Greenborough Marshes character area. The developments would occupy open land which extends up to Milton Creek and up to the marshes to the east of Milton Creek. These cumulative schemes would considerably change this landscape character area to that of Sittingbourne Industrial/Commercial townscape, effectively extending the urban influence south and creating a more developed immediate and wider context. The direct cumulative effects of the cumulative schemes and indirect effects of the WKN Proposed Development on the Chetney and Greenborough Marshes character area would be of medium magnitude on a character area of high sensitivity. The resulting level of cumulative effect would be substantial adverse during the day, which is significant. However, the WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.9.9 When considered in combination the K3 and WKN Proposed Developments and the relevant cumulative developments within the Chetney and Greenborough Marshes and the Iwade Arable Farmland character areas would have an adverse effect on the rural character of these landscapes. The cumulative effects on these character areas would be substantial adverse, which is significant however, the K3 and WKN Proposed Developments would make a negligible contribution to this cumulative effect.

12.9.10 The cumulative commercial development south of Kemsley Paper Mill would change largely rural unlit landscape into well-lit townscape, extending the separation between the WKN Site and the Chetney and Greenborough Marshes. The business park east of Murston would also considerably change the night time character of a rural fringe landscape. limiting any influence that the change in the number of light sources as a result of the addition of the WKN Proposed Development would have over the landscape. The direct cumulative effects of the cumulative schemes and the indirect effect of the proposals over the marshes character area would be medium in magnitude, resulting in a substantial adverse level of cumulative effect at night, which is significant. However, the WKN Proposed Development would make a negligible contribution to this cumulative

effect.

12.9.11 The night time cumulative effects of the cumulative business developments within the Chetney and Greenborough Marshes landscape character area together with the K3 and WKN Proposed Developments in the neighbouring urban area would create a substantial adverse level of effect in the long term, which is significant. However, the K3 and WKN Proposed Developments would make a negligible contribution to this cumulative effect.

12.9.12 The cumulative development of the tile factory and the natural gas reserve power plant would be located within the Luddenham and Conyer Marshes character area. The developments would be located on previously used land or cleared land on the edge of the commercial district of Sittingbourne, approximately 0.7km to 1km to the south of the WKN Site. The effects on this rural and wild character area would be limited due to the reduced sensitivity to change of the site areas. The cumulative schemes would change these fringe areas of the landscape character area to that of Sittingbourne Industrial/Commercial, effectively extending the urban influence north and creating a more developed immediate context for the WKN Proposed Development. The direct cumulative effects of the tile factory and power plant and indirect cumulative effects of the WKN Proposed Development on the Luddenham and Conyer Marshes character area would be of small magnitude on a character area of medium sensitivity. The resulting level of cumulative effect would be slight adverse during the day, which is not significant. The WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.9.13 The combined K3 and WKN Proposed Developments would make a negligible contribution to this cumulative effect on the Luddenham and Conyer Marshes character area.

12.9.14 A large solar farm site east of Sittingbourne would be in the Teynham Fruit Belt character area. This is located approximately 1.5km from the WKN Site and would change the rural character of the landscape and have an influence over the landscape character context of the proposed scheme. The direct cumulative effects of the solar park and the indirect cumulative effects of the WKN Proposed Development would result in a medium magnitude of impact on a medium sensitivity receptor. The level of cumulative effect on the Teynham Fruit Belt would be moderate adverse in the long term, during the day and at night, which is not significant. The WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.9.15 The combined K3 and WKN Proposed Developments would make a negligible contribution to this cumulative effect on the Teynham Fruit Belt character area.

12.9.16 The South Sheppey Marshes and Mudflats, Elmley Marshes and Elmley Island character areas lie north-east of the WKN Site beyond The Swale. The industrial development at Sittingbourne forms a backdrop to these open, rural landscapes which have a high intrinsic sensitivity. The cumulative schemes and the WKN Proposed Development within the Sittingbourne Industrial/Commercial townscape character area and the cumulative schemes in the Chetney and

Greenborough Marshes, Luddenham and Conyer Marshes and Teynham Fruit Belt landscape character areas would add to this concentration of developments and light sources at night, increasing the influence of urban townscape over the rural landscapes of the Isle of Sheppey. The cumulative magnitude of impact would be small resulting in a moderate adverse level of indirect cumulative effect in the day and a negligible adverse level of cumulative change at night, where the presence of more light sources would be difficult to discern from the urban fringe. The WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.9.17 The combined K3 and WKN Proposed Developments would make a negligible contribution to this cumulative effect on the Sheppey Marshes and Mudflats, Elmley Marshes and Elmley Island character areas.

12.9.18 Large residential developments east and south of Iwade, a large residential development north-west of Sittingbourne and a smaller residential scheme adjacent to this at Quinton Road and the thermal conversion energy project would be located in the Iwade Arable Farmlands character area. These are in an area approximately 0.5km to 1.3km to the west and north-west of the WKN Site and would collectively have a significantly urbanising effect on the character area and an influence over the wider rural character context of the scheme through the extension of the Sittingbourne Residential townscape character area. The direct effects of the cumulative schemes and the indirect effect of the WKN Proposed Development on the Iwade Arable Farmland character area would result in a large magnitude of impact on a medium sensitivity receptor. The level of cumulative effect would be substantial adverse in the long term, during the day and at night, which is significant. However, the WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.9.19 The combined K3 and WKN Proposed Developments would make a negligible contribution to this cumulative effect on the Iwade Arable Farmlands character area.

Cumulative Effects on Landscape and Townscape Character between 3km and 10km radius

12.9.20 The Central Sheppey Farmlands character area lies north-east of the WKN Site beyond The Swale, forming a ridge of undulating rural and urban fringe landscapes on the edge of the ZTV. The industrial development at Sittingbourne forms a contrasting edge to this open landscape which has a medium intrinsic sensitivity. The cumulative schemes of the anaerobic digester and wind farm on the high point of the ridge within the centre of the Isle of Sheppey lie approximately 5.5km and 6.5km from the WKN Site. These schemes would include tall structure which would be visible within the wider 10km radius study area. The WKN Proposed Development within the Sittingbourne Industrial/Commercial townscape character area and these cumulative schemes in the distant character area would add to wider pattern of industrial developments within the north Kent landscape. The cumulative magnitude of impact would be medium resulting in a moderate adverse level of indirect cumulative effect in the day and a negligible adverse level of cumulative change

at night, where the presence of more light sources would be difficult to discern from the urban fringe. The WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.9.21 The combined K3 and WKN Proposed Developments would make a negligible contribution to this cumulative effect on the Central Sheppey Farmlands character area.

Cumulative Effects on Visual Resources within a 3km radius

12.9.22 Cumulative visual effects have been assessed based on the 12 viewpoint locations previously identified. Static cumulative effects would occur where receptors look directly towards the proposed scheme and would also see cumulative schemes in the same angle of view. Additional successive cumulative effects would occur where the receptor can turn through 360 degrees to gain views of cumulative schemes in different angles of view.

12.9.23 Walkers using the Saxon Shore Way/Footpath ZU1 south of the WKN Site at Viewpoint 3 and footpath ZU2, east of the WKN Site at Viewpoint 7 would all gain views of the B1 and B2 office development on land south of Kemsley Paper Mill within the same angle of view as the new WKN Proposed Development. The scale and nature of the cumulative scheme and the WKN would change the nature and character of views from these locations. The tile factory and the gas reserve power plant to the south would add to the intensity of industrial development in successive cumulative views. There would be a cumulative effect on views gained by walkers using the Saxon Shore Way in these locations. The sensitivity of the receptor is high and the magnitude of change in view would be medium and long term in nature, leading to a substantial adverse level of cumulative effect, which is significant. However, the WKN Proposed Development would make a slight or negligible adverse contribution to this cumulative effect.

12.9.24 When considered in combination the K3 and WKN Proposed Developments and the relevant cumulative developments would create a more intensively developed industrial/commercial townscape. Visual receptors within the study area would generally gain views of this changed townscape within the same angle of view as the K3 and WKN Proposed Developments. The scale and nature of the cumulative schemes would change the nature and character of some views, resulting in a more developed context at Kemsley for walkers using the Saxon Shore Way near Sittingbourne. Walkers using the Saxon Shore Way are receptors of high sensitivity. The magnitude of change in view in some locations would be medium and long term in nature, leading to a substantial adverse level of cumulative effect, which is significant. However, the K3 and WKN Proposed Developments would make a moderate or slight adverse contribution to these cumulative visual effects, which is not significant.

12.9.25 Walkers using the Saxon Shore Way/Footpath ZR200 north of the WKN Site, at Viewpoint 1 would gain near views of the anaerobic digester in the foreground of views towards the WKN Site partially influencing the character of the view. The sensitivity of the receptor is high and the magnitude of change in view would be

small and long term in nature, leading to a moderate adverse level of cumulative effect, which is not significant. The WKN Proposed Development would make a moderate adverse contribution to this cumulative effect. The gypsum recycling building and CHP at Ridham Docks to the north would add to the intensity of industrial development in successive cumulative views if the viewer turns through 180 degrees.

12.9.26 When considered in combination the K3 and WKN Proposed Developments would also make a moderate adverse contribution to this moderate adverse cumulative effect.

12.9.27 Pedestrians using the roadside pavement of Swale Way at Viewpoint 4 and users of the Church Marshes Country Park at Viewpoint 5, south of the WKN Site, would gain near views of the large scale cumulative scheme of the B1 and B2 office development on land south of Kemsley Paper Mill in the foreground of views towards the WKN Site, whilst the tile factory and gas reserve power plant on the northern edge of the commercial district may also be partly visible. The office development would become the dominant element in the view, significantly changing the character of the view. The WKN Proposed Development is likely to be obscured and would make no additional contribution to cumulative effects on views.

12.9.28 The K3 Proposed Development would also be largely obscured and would make no more than a negligible contribution to cumulative effects on views.

12.9.29 Occupiers of residential properties at Church Road Tonge Corner at Viewpoint 9 would gain views of the cumulative solar farm scheme in addition to the existing solar farm, the tile factory and the gas reserve power plant on the urban edge and more distant, fragmented views of the B1 and B2 office development on land south of Kemsley Paper Mill within the same angle of view as the new WKN Proposed Development. The cumulative schemes would be prominent in the view, although the overall character of the view would remain the same. High sensitivity receptors would experience a small magnitude of change in view, resulting in a moderate adverse cumulative effect during the day and slight effect at night, which is not significant. The WKN Proposed Development would make a negligible adverse contribution to this cumulative effect.

12.9.30 The K3 Proposed Development would be more prominent in the view, largely obscuring the WKN Proposed Development. When considered in combination the K3 and WKN Proposed Developments would make a slight adverse contribution to this moderate adverse cumulative effect.

12.9.31 Open, elevated views from Viewpoint 10 at Elmley Marshes Nature Reserve would enable walkers to see a series of distant cumulative developments including the gypsum recycling building, the anaerobic digester north of the paper mill and the Ridham Dock CHP, the tile factory and gas reserve power plant by Milton Creek and part of the B1 and B2 office development on land south of Kemsley Paper Mill and east of Murston. The Kemsley Paper Mill southern access road may also be partly visible from this location, although would be barely perceptible within this urban context.

12.9.32 The cumulative schemes and WKN Proposed Development would further extend the band of commercial and industrial development which forms a backdrop to the rural landscape. These schemes would combine to form a more developed context although would not change the intrinsic nature and character of the view. Walkers at the nature reserve are of high sensitivity to a small magnitude of change in view, leading to a moderate adverse cumulative effect, during the day and slight effect at night, which is not significant. The WKN Proposed Development would be visible and would make a slight adverse contribution to this cumulative effect.

12.9.33 When considered in combination the K3 and WKN Proposed Developments would also make a slight adverse contribution to this moderate adverse cumulative effect.

Cumulative Effects on Visual Resources between 3km and 10km radius

12.9.34 The anaerobic digester facility and the wind farm on the ridge of high land within the centre of the Isle of Sheppey are unlikely to be visible in the same angle of view as the WKN Proposed Development, from any viewpoint or visual receptor location assessed within this chapter. However, these cumulative developments would be visible as distant, although prominent features on the skyline in successive cumulative views, if the receptor turns through 180 degrees. These viewpoint locations are likely to coincide with the Saxon Shore Way (England Coast Path) and public rights of way within the marshes and the Swale bridge crossings. The cumulative schemes would also be prominent foreground features in views from the central high point on the Isle of Sheppey when looking towards the WKN Proposed Development. The cumulative schemes would extend industrial and energy infrastructure into more prominent locations within largely rural views of the Isle of Sheppey. Many of these receptors would be of high sensitivity and would experience a negligible to large magnitude of change in view, depending on their proximity to the cumulative developments, resulting in a negligible to substantial adverse cumulative effect during the day and negligible to slight effect at night, which is significant. The WKN Proposed Development would make a negligible to slight adverse contribution to these cumulative effects.

12.9.35 The combined cumulative effect of the K3 and WKN Proposed Developments and the anaerobic digester facility and the wind farm on the Isle of Sheppey on visual receptors would result in a negligible to substantial adverse cumulative effect during the day and negligible to slight effect at night, which is significant. The K3 and WKN Proposed Developments would make a negligible to slight adverse contribution to these cumulative effects, which is not significant.

Significant residual effect	Receptor sensitivity	Impact magnitude	Nature	Duration	Degree of effect	Level of certainty
Completed Development Effects: Day and night time effects on rural	High	Medium	Adverse	Long term	Substantial (However, the WKN Proposed Development	Absolute

character of Chetney and Greenborough Marshes					would make a negligible adverse contribution to this cumulative effect).	
Completed Development Effects: Day and night time effects on rural character of Iwade Arable Farmland	Medium	Large	Adverse	Long term	Substantial (However, the WKN Proposed Development would make a negligible adverse contribution to this cumulative effect).	Absolute
Completed Development Effects: Day and night time, sequential views from the Saxon Shore Way/public right of way ZU1/2 at Viewpoints 3 and 7	High	Medium	Adverse	Long term	Substantial (However, the WKN Proposed Development would make a negligible adverse contribution to this cumulative effect).	Absolute
Completed Development Effects: Day and night time successive effects from locations on high land on Isle of Sheppey.	High	Large	Adverse	Long term	Substantial (However, the WKN Proposed Development would make a negligible adverse contribution to this cumulative effect).	Absolute

Table 12.8: Significant residual cumulative landscape, townscape and visual effects

12.10 Summary

12.10.1 The WKN Site currently comprises hardstanding and forms the K3 Site compound and storage area for the construction phase of K3. Large scale industrial buildings, energy infrastructure and chimneys form the southern and western site boundaries, separating the location from the residential districts of Sittingbourne to the west. This urban area is defined as the Sittingbourne Industrial/Commercial townscape character area. The urban character area has 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.

12.10.2 There are no designated landscapes which lie within the WKN Site. The North Kent Marshes Special Landscape Area (Area of High Landscape Value (Kent Level) extends over the Swale and neighbouring coastal landscape. This area includes the Chetney and Greenborough Marshes which lie next to the WKN Site and extend along Milton Creek. This area is valued for the open character of its landscape. A further AHLV (Swale Level) lies inland of the marshes and includes the Teynham Fruit Belt.

12.10.3 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 east on the banks of the Swale. To the east and north-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 visual receptors of high sensitivity and susceptibility to change in view as a result of the WKN Proposed Development include walkers using the Saxon Shore Way long distance footpath (ZU1/2) beside the Swale and Milton Creek. People using this path form the closest high sensitivity receptors and will ultimately form part of a national route, the England Coast Path. The greatest number of visual receptors with views towards the WKN Site would be occupiers of vehicles travelling on Swale Way.

Effects on Landscape and Townscape Character

12.10.4 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 Kemsley Paper Mill and K3. The townscape character of the WKN Site would be of low sensitivity to change through redevelopment. There would be no significant adverse, direct effects on townscape character during construction or when completed, either during the day or at night.

12.10.5 The surrounding rural landscape character areas of the Swale and Isle of Sheppey are generally in good condition and have an intrinsically high value. There would be no direct effects on these rural and wild landscapes and their sensitivity to change through the indirect influence of the WKN Proposed Development would be medium or low. There would be no significant adverse, indirect effects on landscape character during construction or operation during the day or at night.

Effects on Visual Receptors

12.10.6 Walkers using the Saxon Shore Way would experience a sequence of views that would include a more heavily developed cluster of energy infrastructure at Kemsley Paper Mill within a journey between Milton Creek and Ridham Docks. The assessment of individual viewpoints concludes that there would be either a moderate, slight or negligible effect on receptors at each individual location, which is not significant. The magnitude of change in view for receptors is reduced by the existing context of large-scale industrial development, particularly the neighbouring K3 which will obscure views of the WKN Proposed Development in many views. The expectation of a receptor using the Saxon Shore Way is that large scale industrial buildings will be encountered near the route, defining the character and nature of view towards Sittingbourne. Moderate adverse effects

would be experienced by walkers using a relatively short section of the Saxon Shore Way located to the north of the WKN Site where K3 is likely to form a slightly larger group of buildings and infrastructure as a backdrop to the proposals. As a result, the combined sequential effects on walkers is not considered sufficiently adverse to constitute a significant sequential visual effect. Plans to establish the England Coast Path by 2020 on the alignment of the Saxon Shore Way in the vicinity of the WKN Site, whilst not leading to an increase in the level of effect, could lead to an increase in numbers of walkers experiencing these effects in the future. There would also be no significant adverse effects on any other visual receptors within the study area during construction or when development is completed, during the day or at night.

Cumulative Effects on Landscape and Townscape Character

12.10.7 The proposed WKN Proposed Development and many of the relevant cumulative developments lie within the same urban character type comprising the Sittingbourne Industrial/Commercial townscape character area. The existing Kemsley Paper Mill site, neighbouring K3 and nearby industrial developments together with nine cumulative schemes would form a more developed context into which the WKN Proposed Development would be placed. The industrial and commercial characteristics of the northern part of Sittingbourne adjoining the Swale would be intensified within this townscape character area as a result of the addition of the 12 cumulative schemes and the WKN Proposed Development however, the intrinsic character and qualities of the area would remain the same. There would be a medium magnitude of change, leading to a slight adverse level of cumulative townscape effect in the day and at night. The WKN Proposed Development would make a negligible contribution to this cumulative effect.

12.10.8 The large cumulative business development south of Kemsley Mill would lie predominantly within the neighbouring Chetney and Greenborough Marshes character area, considerably changing this landscape character area to that of urban Sittingbourne Industrial/Commercial. The direct cumulative effects of the business park and the indirect effects of the WKN Proposed Development would result in substantial adverse and significant cumulative effects during the day. The large residential schemes east and south of Iwade and west of Sittingbourne would change the rural character of the Iwade Arable Farmlands to an urban townscape of Sittingbourne Residential. The direct cumulative effects of the residential schemes and the indirect effects of the WKN Proposed Development would result in substantial adverse and significant cumulative effects during the day. The WKN Proposed Development would make a negligible contribution to these significant cumulative effects, which would occur even in the absence of the WKN Proposed Development.

12.10.9 When considered in combination the K3 and WKN Proposed Developments and the relevant cumulative developments within the Sittingbourne Industrial/Commercial townscape character area would result in a slight adverse level of cumulative townscape effect in the day and at night. The K3 and WKN Proposed Developments, due to their greater combined scale, would make a slight contribution to this cumulative effect. The indirect effects that the combined K3 and WKN Proposed Developments would make to other landscape

and townscape character areas within the study area would not be significant.

Cumulative Effects on Visual Receptors

12.10.10 Visual receptors within the study area would generally gain views of a more intensively developed industrial/commercial townscape within the same angle of view as the WKN Proposed Development. The scale and nature of the cumulative schemes would change the nature and character of some views, resulting in a more developed context at Kemsley for walkers using the Saxon Shore Way near Sittingbourne. Walkers using the Saxon Shore Way are receptors of high sensitivity. The magnitude of change in view in some locations would be medium and long term in nature, leading to a substantial adverse level of cumulative effect, which is significant. However, the WKN Proposed Development would make a slight or negligible adverse contribution to this cumulative effect.

12.10.11 The anaerobic digester facility and the wind farm on the ridge of high land within the centre of the Isle of Sheppey would be visible as distant, although prominent features on the skyline in successive cumulative views. These viewpoint locations are likely to coincide with the Saxon Shore Way (England Coast Path) and public rights of way within the marshes and the Swale bridge crossings. The cumulative schemes would also be prominent foreground features in views from the central high point on the Isle of Sheppey when looking towards the WKN Proposed Development. Many of these receptors would be of high sensitivity and would experience a negligible to large magnitude of change in view, depending on their proximity to the cumulative developments, resulting in a negligible to substantial adverse cumulative effect during the day and negligible to slight effect at night, which is significant. The WKN Proposed Development would make a negligible to slight adverse contribution to these cumulative effects.

12.10.12 When considered in combination the K3 and WKN Proposed Developments and the relevant cumulative developments would create a more intensively developed industrial/commercial townscape leading to substantial adverse levels of cumulative effect for high sensitivity walkers using the Saxon Shore Way, which is significant. However, the K3 and WKN Proposed Developments would make a moderate or slight adverse contribution to this cumulative visual effect.

References

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12.8 The Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment – Guidance for England and Scotland*

12.9 Natural England (formerly the Countryside Agency and English Nature) *National Character Area Profiles*

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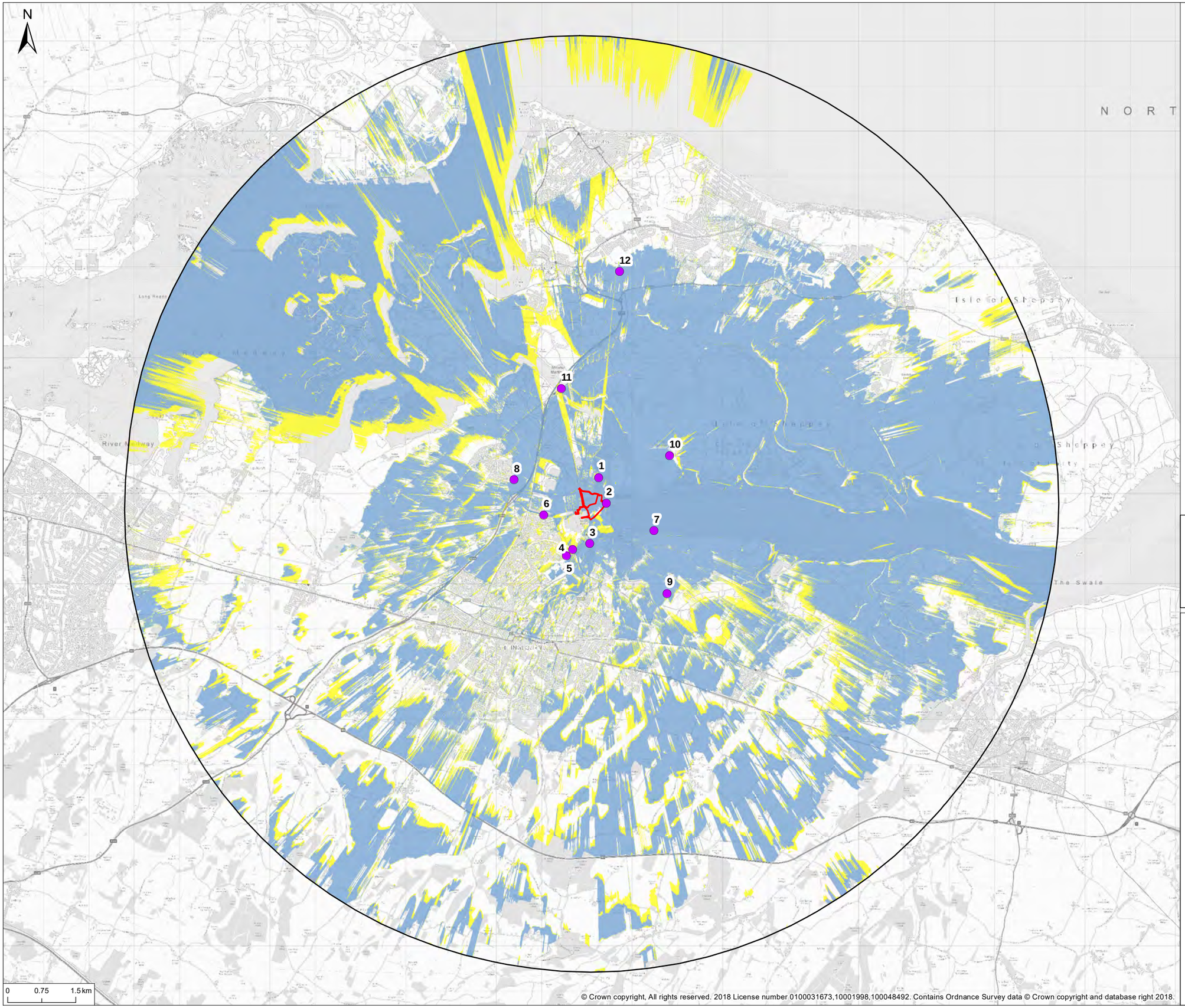
12.12 Swale Borough Council (2011) *Landscape Character and Biodiversity Appraisal Supplementary Planning Document*

12.13 Kent County Council (2001) *Kent Historic Landscape Characterisation*



Legend

- DCO Boundary
- 10km search area
- Viewpoint location
- Buildings Zone of Theoretical Visibility
- Stacks Zone of Theoretical Visibility

Note:
EA 1 m LiDAR and OS Terrtain 5 data has been used to generate the model.

ZTV compiled assuming observer height of 2m at eye level, and takes into account screen effects of existing vegetation and buildings. For OS Terrain 5 data a building height of 9m and vegetation height of 12m was added using OS Open Map layers .

A maximum building height of 58m was used. The stack height was set at 99m on a site foundation of 6.3m AOD

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Client	Wheelabrator Technologies Inc
Project	K3 and WKN DCO
Title	Zone of Theoretical Visibility (ZTV) 10 km radius study area

Status	Drawn By:	PM/Checked By
SUBMISSION	CR	PE
Job Ref	**Scale @ A3**	**Date Created**
JSL3039	1:80,000	MAR 2020

Figure Number
12.1

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Legend

DCO Boundary

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Client: Wheelabrator Technologies Inc

Project: K3 and WKN DCO

Title: Site Context Aerial Photography

Status	Drawn By:	PM/Checked By
SUBMISSION	CR	PE
Job Ref	**Scale @ A3**	**Date Created**
JSL3039	1:20,000	SEPT 2019

Figure Number
12.2

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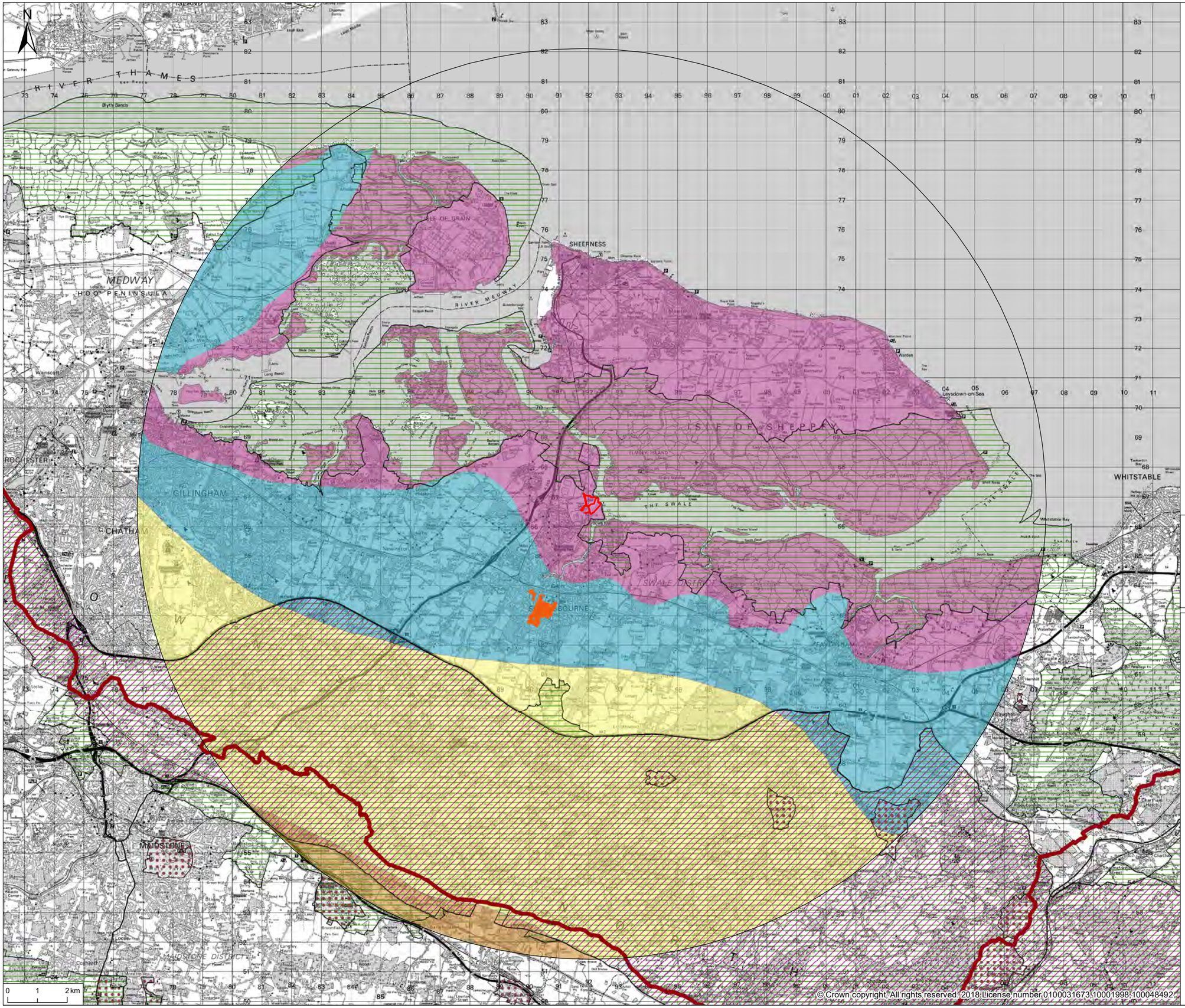

Legend

- DCO Boundary
- 15km search area
- National Trail
- Registered Park and Garden
- Area of Oustanding Natural Beauty
- Special Landscape Area
- Area of High Townscape Value

National Character Area

- Greater Thames Estuary
- North Downs
- North Kent Plain
- Wealden Greensand

Notes
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Client: Wheelabrator Technologies Inc

Project: K3 and WKN DCO

Title: Landscape and relevant designations and National Landscape Character

Status	Drawn By:	PM/Checked By
SUBMISSION	CR	PE
Job Ref	**Scale @ A3**	**Date Created**
OXF9812	1:122,000	SEPT 2019

Figure Number
12.3

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ENVIRONMENTAL STATEMENT

Legend

- DCO Boundary
- 10km search area
- Viewpoint location
- Saxon Shore Way (future England Coast Path)
- Buildings Zone of Theoretical Visibility
- Stacks Zone of Theoretical Visibility

Note:
EA 1 m LiDAR and OS Terrtain 5 data has been used to generate the model.

ZTV compiled assuming observer height of 2m at eye level, and takes into account screen effects of existing vegetation and buildings. For OS Terrain 5 data a building height of 9m and vegetation height of 12m was added using OS Open Map layers .

A maximum building height of 58m was used. The stack height was set at 99m on a site foundation of 6.3m AOD

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Client	Wheelabrator Technologies Inc
Project	K3 and WKN DCO
Title	Zone of Theoretical Visibility (ZTV) detail and photographic viewpoint locations

Status	Drawn By:	PM/Checked By
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Figure Number
12.4

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Existing view with K3

Proposed photomontage with WKN

RPS dha Wheelabrator KEMSLEY **Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 4.4m AOD	Horizontal field of view: Approx. 75^{0} Viewing distance: 300mm @ A3		**Viewpoint 1. Saxon Shore Way/Footpath ZU1, north of the Site** **Figure: 12.5**

Ref: 3039-0008-02

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 3.9m AOD	Horizontal field of view: Approx. 75^{0} Viewing distance: 300mm @ A3	**Viewpoint 2. Saxon Shore Way/Footpath ZU1, north-east of the Site** **Figure: 12.6**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 3.4m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 3. Saxon Shore Way/Footpath ZU1, south of the Site** **Figure: 12.7**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 5.1m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 4. Swale Way, south-west of the Site** **Figure: 12.8**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 4.9m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 5: Church Marshes Country Park** **Figure: 12.9**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator KEMSLEY	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 12.3m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 6. Kemsley residential edge** **Figure: 12.10**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 3.9m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 7. Saxon Shore Way/Footpath ZU2, south-east of the Site** **Figure: 12.11**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 10.7m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 8. Iwade residential edge** **Figure: 12.12**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

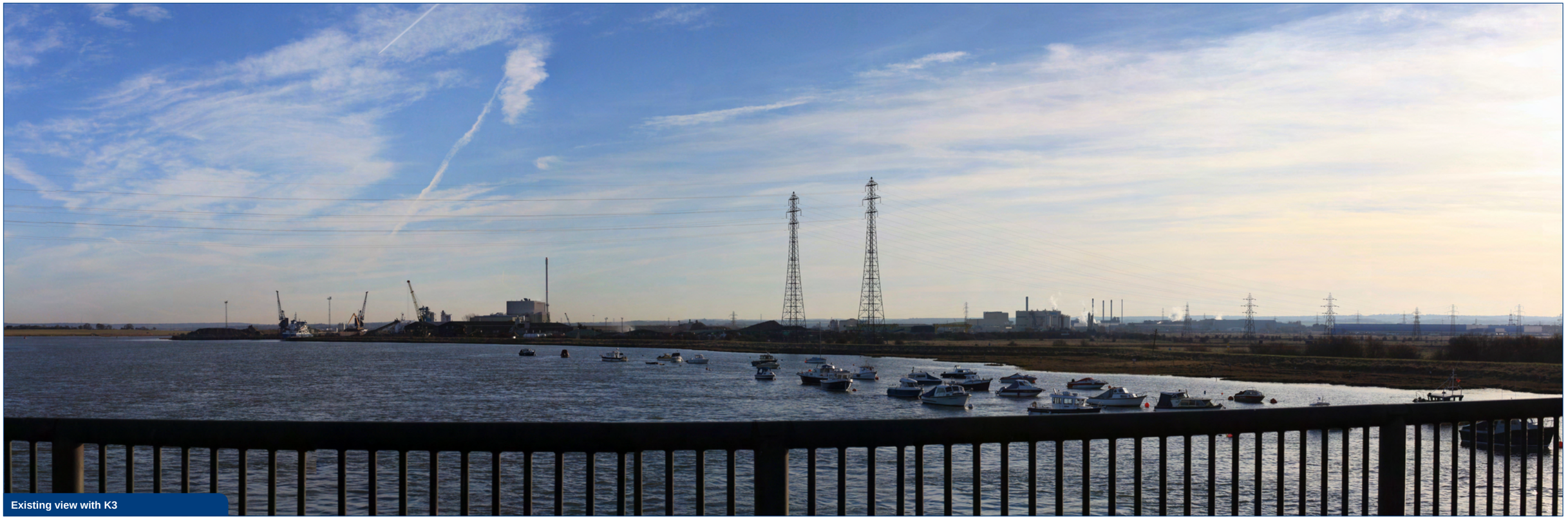
RPS dha Wheelabrator KEMSLEY **Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 18.9m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3		**Viewpoint 9. Church Road at Tonge Corner** **Figure: 12.13**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 7.4m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 10: Elmey Marshes Nature Reserve, public right of way** **Figure: 12.14**



Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

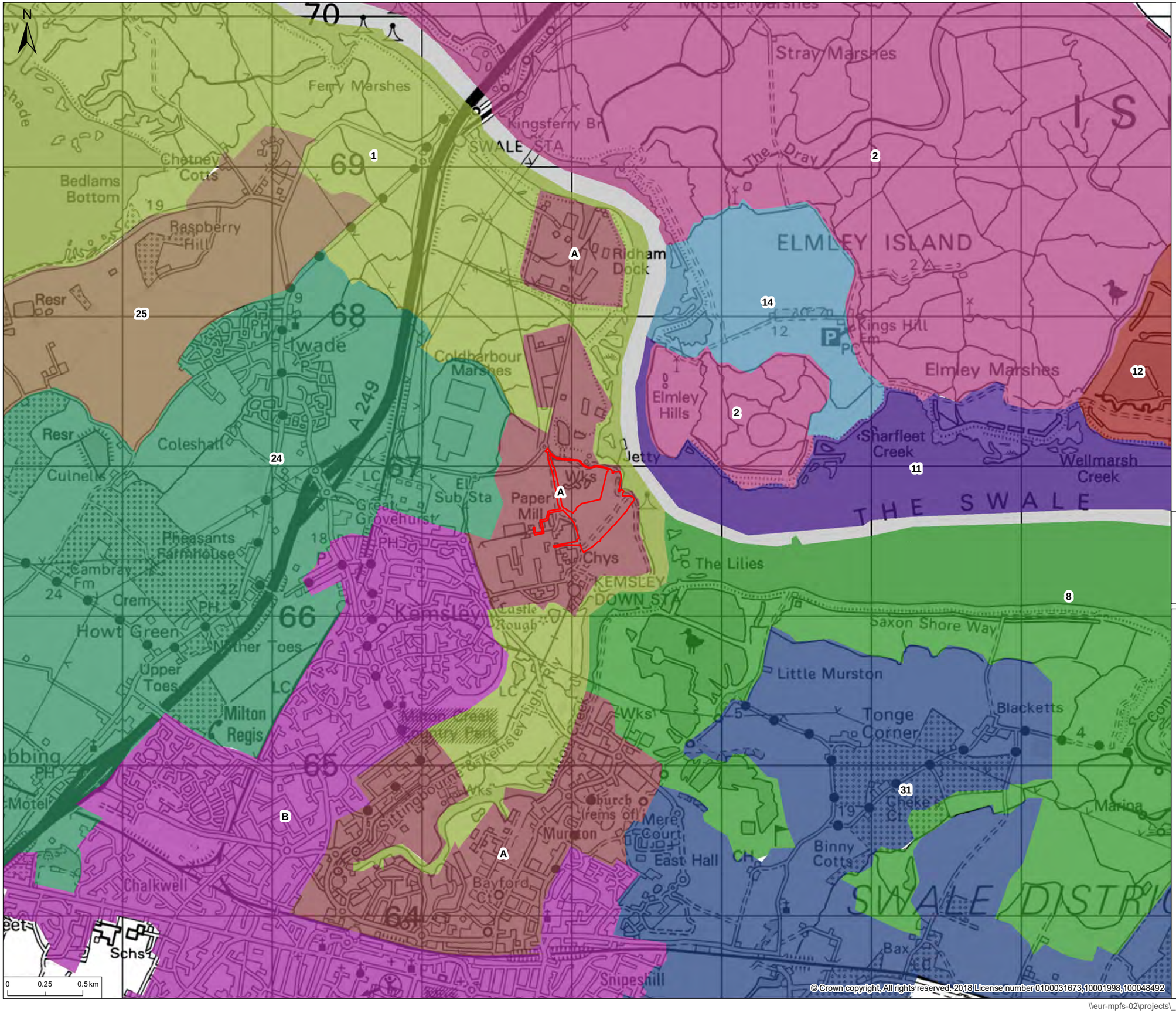
RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 10.5m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 11: Kings Ferry Bridge** **Figure: 12.15**

Existing view with K3

Proposed photomontage with WKN

Ref: 3039-0008-02

RPS dha Wheelabrator Kemsley	**Kemsley WKN**	Date of photography: 14/12/2016 Lens: 50mm (35mm format)	Viewpoint height: 37.4m AOD	Horizontal field of view: Approx. 75° Viewing distance: 300mm @ A3	**Viewpoint 12. Furze Hill, public right of way** **Figure: 12.16**



Legend

- DCO Boundary

Local Landscape Character Areas

- 1, Chetney Marshes
- 2, Elmley Marshes
- 8, Luddenham And Conyer Marshes
- 11, South Sheppey Marshes And Mudflats
- 12, Spitend Marshes
- 14, Elmley Island
- 24, Iwade Arable Farmlands
- 25, Lower Halstow Clay Farmlands
- 31, Teynham Fruit Belt

Townscape Character Areas

- A, Sittingbourne industrial commercial
- B, Sittingbourne residential

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Project	K3 and WKN DCO
Title	Landscape Character Swale District

Status	Drawn By:	PM/Checked By
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Job Ref	**Scale @ A3**	**Date Created**
OXF9812	1:24,000	SEPT 2019

Figure Number
12.17

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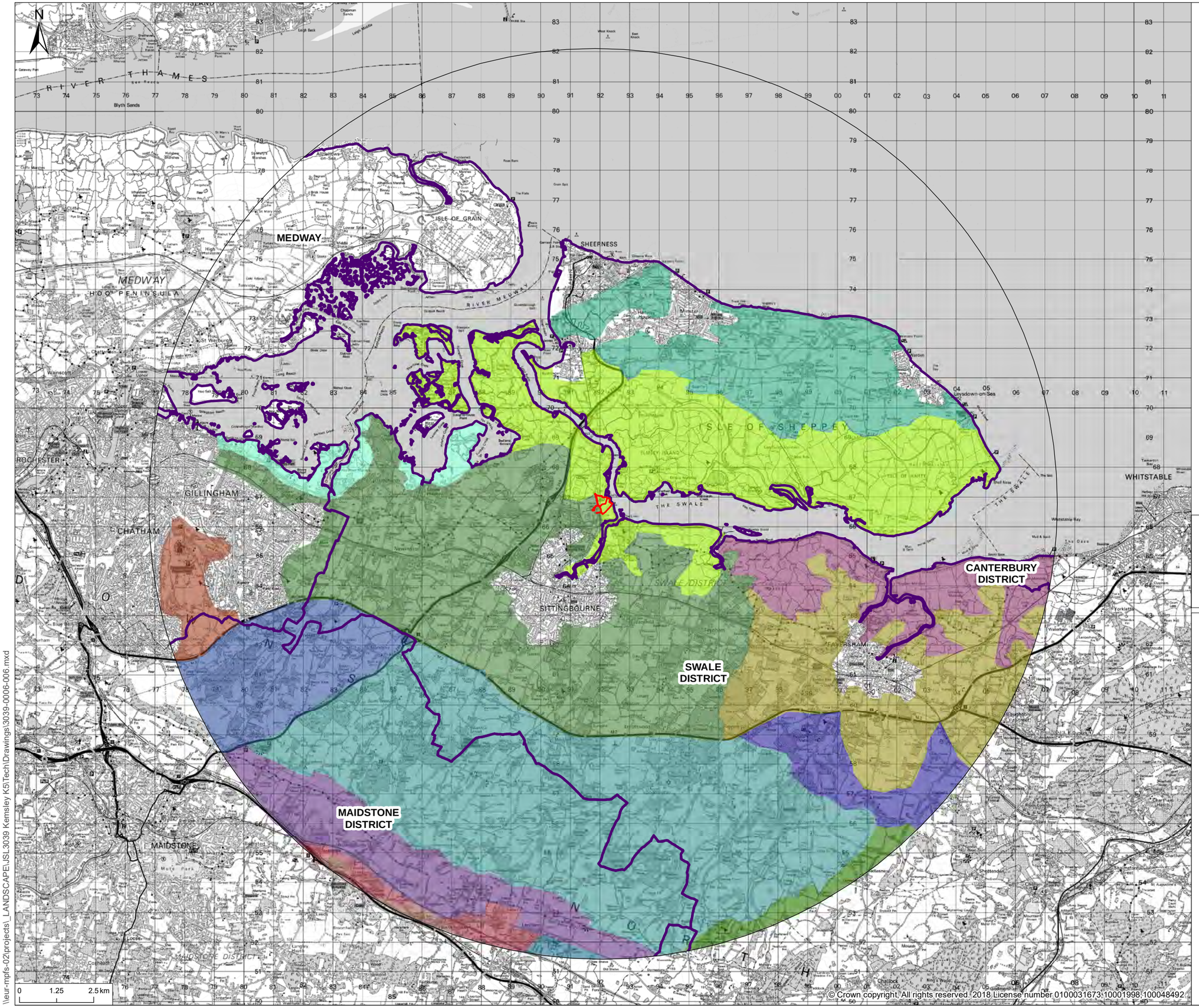

Legend

- DCO Boundary
- 15km search area
- District boundary

Kent County Character Assessment (2004)

- Bicknor : Mid Kent Downs
- Capstone Downs
- Challock : Mid Kent Downs
- Chatham Outskirts : Mid Kent Downs
- Eastern Fruit Belt
- Eastern Swale Marshes
- Faversham Fruit Belt : Mid Kent Downs
- Fruit Belt
- Hollingbourne Vale
- Hollingbourne Vale East
- Hollingbourne Vale West
- Leeds-Lenham Farmlands
- Medway Marshes
- North Sheppey
- Swale Marshes

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Client: Wheelabrator Technologies Inc

Project: K3 and WKN DCO

Title: Landscape Character Kent County

Status	Drawn By:	PM/Checked By
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JSL3039	1:122,000	SEPT 2019

Figure Number

12.18

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