

OIKOS MARINE & SOUTH SIDE DEVELOPMENT



PRELIMINARY ENVIRONMENTAL INFORMATION REPORT VOLUME 2

Appendix 17.1: Landscape & Visual Impact Assessment
Methodology

PINS Reference TR030004
April 2021

Prepared by: fabrik Ltd

1 LANDSCAPE AND VISUAL IMPACT ASSESSMENT (LVIA) METHODOLOGY

Introduction

- 1.1 This Appendix explains the methodology used for the assessment of the landscape and visual impacts of the Oikos Marine and South Side Development project (the OMSSD project) for both the LVIA Chapters of the Preliminary Environmental Investigation Report (PEIR) and the Environmental Statement.
- 1.2 The Oikos Facility is an existing operational site for liquid bulk harbour facilities operated by Oikos Storage Ltd (Oikos) in the southern part of Canvey Island. The facility has been used for marine-fed fuel and associated product storage since the 1930s. It is a key component of the UK's energy infrastructure and a long-established part of the economy and environment of Canvey Island. The Oikos Facility is designated as an upper tier establishment under the Control of Major Accident Hazards Regulations 2015 (COMAH) and the design of the OMSSD project has been influenced by the COMAH regulations to ensure both safety and environmental operational compliance.
- 1.3 The methodology employed in preparing the LVIA for the OMSSD project is drawn from the Landscape Institute and the Institute of Environmental Management and Assessment's 'Guidelines for Landscape and Visual Impact Assessment' Third Edition, Routledge 2013 (GLVIA 3). The method adopted is proportionate to the proposals. The LVIA will also be cognisant of the requirements set out in National Policy Statement (NPS) for Ports (Department for Transport, 26 January 2012) and NPS for Oil and Gas Supply and Storage (EN-1, Department for Business, Energy and Industrial Strategy, 19 July 2011) published by the London Stationery Office.
- 1.4 The term landscape is defined as an area perceived by people, whose character is the result of the action and interaction of nature and / or human factors. It results from the way that different components of our environment – both natural and cultural / historical interact together and are perceived. The term does not mean just special, valued or designated landscapes and it does not only apply to the countryside. The definition of landscape can be classified as:
- All types of rural landscape, from high mountains and wild countryside to urban fringe farmland (rural landscapes);
 - Marine and coastal landscapes (seascapes); and
 - The landscape of villages, towns and cities (townscapes).
- 1.5 The Oikos Facility is an existing, well-established operational harbour facility for the import of

liquid bulk products. The LVIA for the OMSSD project will provide a description of the baseline conditions and will set out how the study area and the Oikos Facility / OMSSD project area appears in 2019/2020 prior to the OMSSD project. The baseline assessment will then be used to predict the landscape and visual impacts arising from the proposed development. The assessment of effect is carried out as part of the iterative design process in order to build in measures to reduce, avoid or mitigate the impacts as much as possible. However, safety requirements, such as COMAH regulations and other stringent safety and security procedures have been taken into consideration as part of the design. The impact assessment will identify and assess the effects during the stages of the proposed development relevant to the OMSSD project (i.e. OMSSD project preparation, construction and operation stages). The assessment will therefore consider the maturation of any landscape proposals.

- 1.6 The photography and preparation of any Visually Verified Montages (VVMs) will be prepared in accordance with Technical Guidance Note 06/19 on Visual Representation of Development Proposals (Landscape Institute, 17 September 2019).

Summary Overview of LVIA Methodology

- 1.7 Landscape and visual assessments are separate, although linked, procedures. For example, often the assemblage of landscape elements contributes to informing the Zone of Theoretical Visibility and the degree of visibility from the range of visual receptors.
- 1.8 The baseline assessment will consider and describe:
- Each of the landscape elements which then collectively inform landscape character for the Oikos Facility and its context;
 - The character, amenity and degree of openness of the view from a range of visual receptors (either transient, serial or static views);
 - The current and any future baseline scenarios; and
 - The value of each of the landscape and visual receptor.
- 1.9 Landscape effects derive from either direct or in-direct changes to the physical landscape, which may give rise to changes to the individual landscape components which in turn affect the landscape character and potentially changes how the landscape is experienced and valued.
- 1.10 Visual effects relate to the changes that arise in the composition, character and amenity of the view as a result of changes to the physical landscape elements.
- 1.11 The assessment of effects therefore systematically:
- Combines the value of the receptor with the susceptibility to the proposed change to determine the sensitivity of the receptor;
 - Combines the size, scale, geographic extent, duration of the proposals and their reversibility in order to understand the magnitude of the proposal;
 - Combines the sensitivity of the each of the receptors and the magnitude of effect to determine the significance of the effect;

- Presents the landscape and visual effects in a factual logical, well-reasoned and objective fashion;
 - Indicates any additional measures proposed over and above those designed into the scheme to prevent/avoid, reduce, offset, remedy, or compensate for the effects (mitigation measures) or which provide an overall landscape and visual enhancement wherever possible in the parameter plans;
 - Sets out any assumptions considered throughout the assessment of effects; and
 - Sets out any residual effects.
- 1.12 Effects may be positive or negative, direct or indirect, residual, permanent or temporary (short, medium or long term). They can also arise at different scales (national, regional, local level) and have different levels of significance (major, moderate, low, negligible or neutral / no change). Residual effects are those considering any additional mitigation measures in place over and above those designed into the scheme and the maturation of the landscape proposals at year 15.
- 1.13 The combination of the above factors influences the professional judgement and opinion on the significance of the landscape and visual effect.
- 1.14 Cumulative effects of all other known development will also be assessed based on a list of projects set out in the Scoping Report; the Scoping Opinion and as agreed with the statutory consultees by the ES co-ordinators and reported in the final OMSSD ES.
- 1.15 The following sections sets out in more detail the assessment process that will be employed.

Establishing the Landscape Baseline

Desk and Field Studies

- 1.16 The initial step was to identify the existing landscape and visual resource in the vicinity of the proposed development - the baseline landscape and visual conditions. The baseline study is to record and analyse the existing landscape, in terms of its constituent elements, features, characteristics, geographic extent, historical and cultural associations, condition, the way the landscape is experienced and the value / importance of that particular landscape. The baseline assessment identifies any potential changes likely to occur in the local landscape which will change the characteristics of either the Oikos Facility or its setting.
- 1.17 A desk study is carried out to establish the physical components of the local landscape and to broadly identify the boundaries of the study area. Ordnance survey (OS) maps and digital data are used to identify local features relating to topography/ drainage pattern, land cover, vegetation, built developments/settlement pattern, transport corridors/definitive Public Rights of Way (PRoW) and any historic or prominent landscape features, which together combine to create a series of key characteristics and character areas. Vertical aerial photography and Google streetview will be used to supplement OS information. At this stage, any special designated landscapes (such as Areas of Outstanding Natural Beauty, National Parks, Green Belt, Conservation Areas, Listed Buildings, Areas of Special Character); heritage or ecological assets are identified. A review of information available in terms of any published

historic landscape characterisation together with any other landscape / capacity / urban fringe and visual related studies is carried out at this stage. In addition, a desk study of any unbuilt commitments will be incorporated.

- 1.18 A landscape character assessment is the tool for classifying the landscape into distinct character areas or types, which share common features and characteristics. There is a well-established methodology developed in the UK by the Countryside Agency and Scottish Natural Heritage in 2002, which has been superseded in England by guidance published by Natural England in 2014. The national, regional, county and district level character assessments (by Natural England, Essex County Council, Kent County Council and Castle Point Borough Council) are available in published documents and will be included in the LVIA. A local level landscape character assessment has been carried out as part of this LVIA, which covers the landscape, townscape and seascape. The character assessments will often also identify environmental and landscape opportunities, recent changes, future trends and forces for change where they may be important in relation to the proposal, especially considering how the landscape appears, or would appear prior to the commencement of development. The condition of the landscape, i.e. the physical state of an individual area of landscape, will be described as factually as possible. The assessment of landscape importance includes reference to policy or designations as an indicator of recognised value, including specific features or characteristics that justify the designation of the area. The value of that landscape by different stakeholders or user groups may also influence the baseline assessment.
- 1.19 These desk-based studies were then used as a basis for verification in the field. The field-based assessment also considers the perceptual qualities of the landscape, including tranquillity.
- 1.20 Judgements on the value of both the landscape and visual receptor are made at the baseline stage.

Landscape Value

- 1.21 Value is concerned with relative value or importance that is attached to different landscapes. The baseline assessment considers any environmental, historical and cultural aspects, physical and visual components together with any statutory and non-statutory designations and takes into account other values to society, which may be expressed by the local community or consultees. The tables set out on the following pages are a starting point for consideration in the field. The following table, which has been developed from that the guidance set out in GLVIA 3 (para 5.19-5.31), sets out the criteria and definitions used in the baseline assessment to determine landscape value (in addition to condition / quality).

Table 1 Landscape Value Criteria

Criteria	Evaluation Criteria
High Landscape Value	<ul style="list-style-type: none"> ▪ An exceptional landscape with outstanding perceptual qualities (is wild and tranquil). An area that is wholly intact, natural and has high scenic qualities. It contains rare elements and features. ▪ Lies wholly within a designated landscape where localised character and scenic value is distinct. The landscape may include World Heritage Sites,

	<p>National Parks, Areas of Outstanding Natural Beauty or Heritage Coast or key elements/features that are representative; together with any non-statutory designations. Alternatively, the landscape may be un-designated but is valued as it comprises all of the key elements that are wholly representative of published landscape character assessments and which, for example, identify nationally or locally significant natural, historical, artistic or cultural connections which assist in informing the identify of a local area (such as 'Constable Country' or 'Jurassic Coast'). Special components of the landscape, or a specific tract of land may be valued at the local level as identified through Neighbourhood Plans or engagement with local stakeholders;</p> <ul style="list-style-type: none"> ▪ Recognisable landscape structure, characteristic patterns and combinations of landform and landcover are evident, resulting in a strong sense of place; ▪ A landscape that contains particular characteristics or elements particularly important to the character of the area or scenic value; ▪ A valued landscape for recreational activity, access, views, sporting facilities, biodiversity interest, quiet enjoyment or where the experience of the landscape is important; ▪ Very good or good condition overall with appropriate management for land use and land cover, or with some scope to improve certain elements; ▪ Unique sense of place; ▪ No or limited detracting features.
Medium Landscape Value	<ul style="list-style-type: none"> ▪ An ordinary landscape and with some perceptual qualities. Includes some intact natural areas and attributes, in part scenic or where scenic qualities are degraded and demonstrates a degree of wildness and tranquillity; ▪ The area lies wholly or partially in a designated landscape. The landscape may include local designations such as Special Landscape Areas, Areas of Great Landscape Value, Strategic or Local Gaps; or un-designated but value expressed through regional or local natural, historical and / or cultural associations; or through demonstrable use by the local community for recreation (such as local green spaces, village greens or allotments); together with any non-statutory designations. Alternatively, the landscape may be valued as it demonstrates some locally distinctive landscape elements identified in the landscape character assessment; ▪ Lies adjacent to and forms the landscape setting to a nationally designated landscape; ▪ Distinguishable landscape structure, with some characteristic patterns and elements moderately important to the character of the area; ▪ Typical, commonplace farmed landscape with limited variety or distinctiveness; ▪ A landscape which provides some recreational activity, access, views, sporting facilities, biodiversity interest, quiet enjoyment and where there are focused areas to experience the landscape qualities; ▪ Good to ordinary condition, with some high quality elements and scope to improve management; ▪ Some dominant features worthy of conservation; ▪ Some detracting / degraded features.
Low Landscape Value	<ul style="list-style-type: none"> ▪ A poor landscape with limited perceptual qualities (limited natural attributes, sense of wildness and tranquillity); ▪ Generally un-designated. Certain individual landscape elements or features identified in landscape character assessments may be worthy of conservation or a landscape that would benefit from restoration or enhancement (such as local parks and open spaces). ▪ Monotonous, weak, uniform or degraded landscape or townscape which has lost most of its natural or built heritage features and where the landcover are often masked by land use; ▪ Does not possess any locally important, distinctive landscape characteristics or scenic value / interest; ▪ A landscape which does not present an important public amenity value through recreation, views, access, biodiversity interest or quiet enjoyment;

	<ul style="list-style-type: none"> ▪ Ordinary – poor condition with lack of management and intervention has resulted in degradation; ▪ Frequent dominant detracting features; ▪ Disturbed or derelict land requires treatment.
--	---

Night-time Character Assessment

- 1.22 During the field survey stage a baseline night-time ‘darkness’ character assessment was carried out to understand whether the Oikos Facility and OMSSD Project area is currently influenced by lighting at night. This assists in understanding the likely effects of the proposal on the night-time character and visual experience, especially considering those receptors immediately adjacent to or travelling past the Oikos Facility / OMSSD project area.
- 1.23 A night-time lux level assessment is that which is carried out by lighting engineers and may be used to inform the night-time character assessment.

Establishing the Visual Baseline

Desk and Field Studies

- 1.24 The visual baseline has established the area in which the Oikos Facility and the OMSSD project may be visible, the different groups of people who may experience the views, the places where they will be affected and the nature, character and amenity of those views.
- 1.25 The area of study for the visual assessment has been determined through manual topographical analysis (a combination of desk and field based analysis). Viewpoints within the zone of visibility were identified during the desk assessment and have been agreed with the Landscape Consultant to Essex County Council, and the viewpoints used for photographs selected to demonstrate the relative visibility of the Oikos Facility (and the existing development on it and its relationship with the surrounding landscape and built forms). The actual extent of visibility was then checked in the field to record the screening effect of buildings, walls, fences, trees, hedgerows and banks not identified in the initial bare ground mapping stage and to provide an accurate baseline assessment of visibility. The selection of a range of key viewpoints were determined in the field based on the following criteria:
- The selection of views to provide an even spread of representative, specific, illustrative or static / kinetic / sequential / transient viewpoints around all sides of the Oikos Facility.
 - From locations which represent a range of near, middle and long distance views (although the most distant views may be discounted in the impact assessment if it is judged that visibility will be extremely limited).
 - Views from sensitive receptors within designated, historic or cultural landscapes or heritage assets (such as from within World Heritage Sites; adjacent to Listed Buildings - and co-ordinated with the heritage consultant; National Parks; Areas of Outstanding Natural Beauty or Registered Parks and Gardens); key tourist locations; and any public vantage points (such as viewpoints identified on OS maps).
 - The inclusion of strategic / important / designed views and vistas identified in published documents.

- The selection of viewpoints considering cumulative views of the proposed development in conjunction with other developments (as agreed between the parties).
- 1.26 Views from the following have been included in the visual assessment:
- Individual private dwellings. These are to be collated as representative viewpoints as it's not practical to visit all properties that might be affected;
 - Key public buildings, where relevant (i.e. libraries, hospitals, churches and community halls);
 - Transient views from public viewpoints (i.e. from roads, railway lines and Public Rights of Way - including scenic routes, national trails or long distance paths and associated viewpoints);
 - Areas of publicly accessible green space (i.e. open space, open access land, recreation grounds, country parks, visitor attractions, tourist destinations or scenic viewpoints); and
 - Places of employment, are to be included in the assessment where relevant.
- 1.27 The final selection of the key representative viewpoints has been based proportionately in relation to the scale and nature of the OMSSD project and likely significant effects and in agreement with the Landscape Officer to Essex County Council.
- 1.28 The visual assessment recorded:
- The character and amenity of the view, including topographic, geological and drainage features, woodland, tree and hedgerow cover, land use, field boundaries, artefacts, access and rights of way, direction of view and potential seasonal screening effects and any skyline elements or features;
 - The type of view, whether oblique or direct, panoramic or vista
 - The conspicuousness of the Oikos Facility;
 - The type of view, whether panoramas, vistas or glimpses; and
 - The extent of visibility of the range of receptors based on a grading of degrees of visibility, from a visual inspection of the Oikos Facility and surrounding area. There will be a continuity of degree of visibility ranging from no view of the Oikos Facility (truncated) to fully open views. Views are recorded, even if views are truncated of the existing Oikos Facility, as the OMSSD project may be visible in these views. To indicate the degree of visibility of the Oikos Facility from any location, three categories are used:
 - Open View:
An open, unobstructed and clear view of a significant proportion of the ground plane of or elements within the Oikos Facility; or its boundary elements; or a clear view of part of the Oikos Facility and its component elements in close proximity.
 - Partial View:
A view of part of the Oikos Facility, a filtered or glimpsed view of the Oikos Facility, or a distant view where the Oikos Facility is perceived as a small part of the wider view;
 - Truncated View:
No view of the Oikos Facility or the Oikos Facility is difficult to perceive.
- 1.29 Following the field survey the extent to which the existing OMSSD project area is visible from the surrounding area will be mapped through the preparation of a Visual Summary Plan, which sets out the photographic viewpoints and their degree of visibility. The visual assessment includes a series of annotated photographs, the location and extent of the Oikos Facility within the view, together with identifying the character and amenity of the view,

together with any specific elements or important component features such as landform, buildings or vegetation or detracting features which interrupt, filter or otherwise influence views. The photograph will also be annotated with the value attributed to the visual receptor or group of receptors.

- 1.30 At the end of this stage of the combined landscape and visual study, it will be possible to advise, in landscape and visual terms, on any specific mitigation measures required in terms of the developments preferred siting, layout and design wherever suitable, in conjunction with the considerations of COMAH regulations and other safety and security procedures.

Value of Visual Receptors

- 1.31 Judgements on the value attached the views experienced are based on the following criteria, which has been developed from the guidance set out in GLVIA 3 (para 6.37).

Table 2 – Value Attached to Views

Value	Criteria
High	Views from and to landscapes / viewpoints of national importance, or highly popular visitor attractions where the view forms a significant role in the visual experience, and / or has nationally recognised cultural associations. This may include residential receptors in Listed Buildings where the primary elevation of the dwelling is orientated to take advantage of a particular view (for example across a Registered Park and Garden or National Park).
Medium	Views from and to landscapes / viewpoints of regional / district importance or moderately popular visitor attractions where the view forms part of the experience, and / or has local cultural associations. This may include residential receptors where the primary elevation of the dwelling is orientated to take advantage of a particular view.
Low	Views from and to landscapes / viewpoints with no designation, not particularly important and with minimal or no cultural associations. This may include views from the rear elevation of residential properties.

Predicting and Describing the Landscape and Visual Effects

- 1.32 An assessment of visual effect deals with the change on the character and amenity arising from the Proposal Development on the range of visual receptors.
- 1.33 The assessment of effects aims to:
- Identify systematically and separately the likely landscape and visual effects of the Proposed Development;
 - Identify the components and elements of the landscape that are likely to be affected by the Proposed Development;
 - Identify interactions between the landscape receptors and the different components of the development at all its different stages (construction and operation etc.);

- Indicate the mitigation measures over and above those already designed into the scheme proposed to avoid, reduce, remedy or compensate for these effects;
 - Estimate the magnitude of the effects as accurately as possible and considering this in relation to the sensitivity of the receptor; and
 - Provide an assessment of the significance of these effects in a logical and well-reasoned fashion.
- 1.34 Having established the value of the landscape and visual receptor, the effects have then been considered in relation to the magnitude of change, which includes the size / scale, geographical extent of the areas influenced and the duration and reversibility.
- 1.35 Wherever relevant tables or matrixes will be used in the assessment, linked with the parameter plans, so that the landscape and visual effects are recorded and quantified in a systematic and logical manner. Consideration has been given to the landscape and visual effects during OMSSD project enabling and construction phase; at the completion of the whole development; and then again considering the maturation of the landscape proposals at year 15. Assumptions or limitations to the assessment have also be set out.
- 1.36 Effects include the direct and/or indirect impacts of the Proposed Development on individual landscape elements / features as well as the effect upon the landscape character and the range of visual receptors, with reference to the key representative viewpoints.

Landscape Susceptibility

- 1.37 Landscape susceptibility is evaluated by its ability to accommodate the proposed change (i.e. the degree to which the landscape is able to accommodate the Proposed Development without undue consequences for the maintenance of the baseline situation and / or the achievement of landscape planning policies and strategies) as set out in Table 3 below.
- 1.38 As part of the assessment of the landscape character and its component parts, conclusions have also been drawn as to the overall susceptibility of the landscape / landscape elements and visual environment to the type of development proposed.

Table 3: Landscape Susceptibility Criteria

Susceptibility	Criteria
High	A landscape or townscape particularly susceptible to the proposed change, which would result in significant negative effects on landscape character, value, features or individual elements.
Medium	A landscape or townscape capable of accepting some of the proposed change with some negative effects on landscape character, value, features or elements.
Low	A landscape or townscape capable of accommodating the proposed change without significant negative effects on landscape character, value, features or elements.

Landscape Sensitivity

- 1.39 The assessment of landscape sensitivity is then combined through a judgement on the value

attributed to that landscape receptor / component and the susceptibility of the landscape receptor to the proposed change using the following matrix.

Table 4: Landscape Receptor Sensitivity

		Landscape Receptor Susceptibility		
		High	Medium	Low
Landscape Value	High	High	Medium - High	Medium
	Medium	Medium - High	Medium	Medium - Low
	Low	Medium	Medium - Low	Low

Visual Receptor Susceptibility

- 1.40 The susceptibility of the different types of visual receptors to the changes proposed is based on the occupation of the activity of the viewer at a given location; and the extent to which the person's attention or interest may be focussed on a view, considering the visual character and amenity experienced at a given view. The criteria used to assess the susceptibility of a visual receptor is set out in Table 5.

Table 5: Visual Susceptibility Criteria

Susceptibility	Criteria
High	<p>People particularly susceptible to the proposed change because they have a particular interest in the view, and/or with prolonged viewing opportunity of the Oikos Facility / OMSSD project, such as:</p> <ul style="list-style-type: none"> ▪ Residents with direct/clear/open views of the Oikos Facility; ▪ Those using Public Rights of Way, Access land, Commons or outdoor recreation facilities, where views are an important contributor to the experience; ▪ Those with views from designated landscapes and heritage assets, or views described in literature, where the views of the surroundings are an important contributor to the experience; ▪ Those using described/published scenic routes where views contribute to the enjoyment and quality of the journey; and ▪ Those with clear views of areas within or around the Oikos Facility, that contribute to landscape setting, and/or which are enjoyed by the community. <p>Taking into account:</p> <ul style="list-style-type: none"> ▪ Where important views into and out of a settlement cannot be mitigated; ▪ Where the area forms an important setting to the settlement and where development would create an unacceptable visual intrusion into the countryside that could not be mitigated; ▪ Whether the land is very open to public or private views where views of the countryside or open space are very important; and ▪ Whether development would be uncharacteristically conspicuous and could not be successfully mitigated.
Medium	<p>People partially susceptible to the proposed change because they have a moderate interest in the view, and/or with some viewing opportunity of the Oikos Facility / OMSSD project, such as:</p> <ul style="list-style-type: none"> ▪ Those with an oblique or limited view toward the Oikos Facility, which may include some residents; ▪ Those travelling through the landscape on roads or Public Rights of Way, or through Access land/Commons where views are partly constrained, or where views only partly contribute to the experience;

	<ul style="list-style-type: none"> ▪ Those using outdoor recreation facilities, where views are incidental or not important to their enjoyment of that activity. ▪ Those using roads that are not described/not published scenic routes, but where the appreciation of the view partly contributes to the enjoyment and quality of that journey. Those travelling by train or other transport modes; and ▪ Those with partial views of areas within or around the Oikos Facility, that contribute to landscape setting, and/or which are enjoyed by the community. <p>Taking into account:</p> <ul style="list-style-type: none"> ▪ Where the views into and / or out of the settlement are of some importance but there is scope for mitigating potential visual impacts; ▪ Where the view is of some importance to the setting of the settlement but development could be mitigated so that visual intrusion into the countryside is acceptable; ▪ Whether the land is partially open to public or private views where views of the countryside are important, or is more open to views in which the countryside or open space is of less importance; and ▪ Whether development is likely to be perceptible but would not significantly alter the balance of features or elements within the existing view.
Susceptibility	Criteria
Low	<p>People with limited susceptibility to the proposed change because they have momentary, or little interest in the view and their surroundings, and/or because they have little viewing opportunity of the Oikos Facility / OMSSD project, such as:</p> <ul style="list-style-type: none"> ▪ Those with very oblique, limited or distant views of the Oikos Facility, which may include some residents; ▪ Those travelling through the landscape on roads or Public Rights of Way, or through Access land/Commons where views are largely constrained (for example within or alongside a woodland); or where views make a limited contribution to the experience; ▪ People engaged in outdoor sport, whose attention is focused on their activity; ▪ People at their work place, whose attention is focused on their employment; ▪ Travellers where the view is fleeting (for example, due to the speed of the road, or boundary vegetation) or where views are incidental to the experience of the journey; and ▪ Long distance views where the Oikos Facility and proposed development form a small part of the wider panorama. <p>Taking into account:</p> <ul style="list-style-type: none"> ▪ Where the views are of little or no importance to the setting of the settlement such that development would not lead to unacceptable visual intrusion into the countryside, with or without mitigation; ▪ Whether the land is well screened from public or private view; and ▪ Whether development would not be discernible or would enhance views or existing visual amenity.

Visual Sensitivity

1.41 The sensitivity of the visual receptors is determined by combining the value and susceptibility to change on that visual receptor.

Table 6: Visual Receptor Sensitivity

		Visual Receptor Susceptibility		
		High	Medium	Low
Visual Receptor Value	High	High	Medium - High	Medium
	Medium	Medium - High	Medium	Medium - Low
	Low	Medium	Medium - Low	Low

Magnitude of Effects

- 1.42 Magnitude is to be determined relative to the size, scale, geographic extent, duration, permanence and reversibility of the individual project through the application of professional judgement and opinion.
- 1.43 The following have been used:
- 1.44 **Size and Scale:** relates to the combination of the following (and are linked to the descriptions set out under table 7 and 9):
- the extent of existing landscape elements that will be lost (to proportion of the total extent that is lost) and the contribution that the element has to landscape character;
 - the degree to which aesthetic or perceptual aspects of the landscape are altered;
 - whether the effect changes the key characteristics of the landscape (addition or removal of features and elements);
 - size and scale of change in the view (with respect to the loss or addition of features in the view) and changes to the composition, including the proportion of the view occupied by the Proposed Development;
 - the degree of contrast or integration of any new features or changes in the built form arrangement with the existing or remaining landscape elements and characteristic terms of form, scale, mass, line, height, colour and texture;
 - the nature of the view of the Proposed Development, in terms of relative amount of time over which it will be experienced and whether views will be open, partial, or glimpsed.
- 1.45 **Geographic Extent:** In relation to landscape effects, this considers the geographic area over which the landscape effects will be felt relative to the proposal; effects limited to a localised area associated with the Oikos Facility; effects on the immediate setting; effects relating to the scale of the landscape type or character area (district, regional or national level); or effects on a larger scale such as influencing several landscape character areas.
- 1.46 In relation to visual receptors, the geographic extent is to reflect the angle of the view; the distance of the viewpoint (immediate environs / short distance, local area / middle distance or wider area / long distance); the extent of the area over which the changes would be visible as set out in the table below.

Table 7 – Geographic Extent Criteria

Extent	Description
Immediate environs / Short distance	Changes where the proposed development is located: <ul style="list-style-type: none"> ▪ in the main focus of the view; ▪ and/or at close range; ▪ and/or over a large area.
Local area / Middle distance	Changes where the proposed development is located: <ul style="list-style-type: none"> ▪ obliquely to the main focus of the view; ▪ and/or at medium range; ▪ and/or over a narrow area.
Wider area / Long distance	Changes where the proposed development is located: <ul style="list-style-type: none"> ▪ on the periphery of the main focus of the view; ▪ and/or at long range; ▪ and/or over a small area.

- 1.47 **Duration, Permanence and Reversibility:** These are separate but linked considerations. The construction impacts are anticipated to be medium-term, but see the commencement of a permanent change. Operational effects will be long term, permanent and either irreversible or reversible as set out above. Descriptions for all durations are set out as below:

Table 8 –Duration Criteria

Duration	Description
Permanent	The change is either expected to be permanent with no intention for it to be reversed; or occurring for a period longer than 25 years.
Temporary Long-term	The change is expected to be in place for 10-25 years and will be reversed, fully mitigated; or no longer occurring beyond that timeframe.
Temporary Medium-term	The change is expected to be in place for 2-10 years and will be reversed, fully mitigated; or no longer occurring beyond that timeframe.
Temporary Short-term	The change is expected to be in place for 0-2 years and will be reversed, fully mitigated; or no longer occurring beyond that timeframe.

Table 9: Magnitude of Landscape and Visual Effects

Magnitude Elements					Magnitude of Change
Size / Scale		Geographic Extent	Duration and Permanence	Reversibility	
Major	Significant change to the landscape elements, key characteristic features and perceptual qualities; significant change to an open or partial view (static or transient). A major change overall.	Proposal affects wider setting a district or regional level; effects at the OMSSD project area or immediate setting to the OMSSD project area; effects a single or several landscape character areas. Middle distance or close range; direct or oblique views; readily noticeable and perceived change.	Permanent or temporary (long, medium or short term).	Irreversible or reversible.	High
Moderate	Some change to the landscape elements, key characteristic features and perceptual qualities; Moderate or significant change to static or transient, partial view. A moderate change overall.	Proposal affects the OMSSD project area or immediate setting to the OMSSD project area; effects a single or several landscape character areas. Middle distance views; direct or oblique views; partially obscured views; moderately perceived change.	Permanent or temporary (long, medium or short term).	Irreversible or reversible.	Medium
Minor	Small change to the landscape elements, key characteristic features and perceptual qualities; Small change to a static or transient partial or glimpsed view. A minor change overall.	Proposal affects the OMSSD project area, immediate setting to the OMSSD project area, or wider setting; covering a single landscape character area. Distant views; very oblique; small perceived change.	Permanent or temporary (long, medium or short term).	Irreversible or reversible.	Low
Negligible	Small, imperceptible change.	Any of the above.	Permanent or temporary (long, medium or short term).	Irreversible or reversible.	Negligible
No Change	No actual or perceived change.	Proposal would not change or affect any of the above.	Permanent or temporary (long, medium or short term).	Irreversible or reversible.	Neutral

Significance of Effects

- 1.48 The two principal criteria determining the significance of effects are the sensitivity of the receptor in relation to the magnitude of effect. A higher level of significance is generally attached to the magnitude of change on a sensitive receptor; for example, a low magnitude of change on highly sensitive receptor can be of greater significance than very high magnitude of change on low sensitivity receptor. Therefore, whilst Table 8 sets out a starting point for the assessment, a balanced and well-reasoned professional judgement of these two criteria is applied and an explanation provided in the assessment.
- 1.49 In order to develop thresholds of significance, both the sensitivity of receptors and the magnitude of change have been classified for both landscape receptors and visual receptors as set out in the following tables. Where landscape effects are judged to be negative, additional mitigation or compensatory measures are to be considered. The significant landscape effects remaining after any additional mitigation measures are proposed over and above those embedded into the Proposed Development are then to be summarised as the residual effects.
- 1.50 Impacts have been described clearly and objectively, and the extent and duration of any negative / positive effects quantified, using four categories of effects, indicating a graduation from high to low.

Table 10: Significance of effects matrix

Magnitude of impact (degree of change)	Landscape / Visual receptor Sensitivity			
	High	Medium	Low	Negligible
Major	Major	Moderate - Major	Moderate	Minor
Medium	Moderate - Major	Moderate	Moderate - Minor	Negligible
Low	Moderate	Moderate - Minor	Minor	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

- 1.51 Where a range has been provided, professional judgement will be used to define the significance against the scale in the following table:

Table 11 – Significance of Effects Criteria for Landscape and Visual Receptors

Effect Significance	Criteria
Major	<p>Significant change to the landscape elements, key characteristic features and perceptual qualities; Major change to a static open or partial view. Significant change to the landscape elements, key characteristic features and perceptual qualities; Major change to a static open or partial view.</p> <p>Major positive effect: Where the proposals would cause a significant enhancement to the key mature landscape elements or characteristic features; or introduce new elements considered wholly characteristic of the area; a significant improvement in the character and amenity of the close or middle distance view in terms of perceptual qualities for a range of visual receptors and range of distances.</p> <p>Major negative effect: Where the proposals would:</p>

	<ul style="list-style-type: none"> • cause a total or significant loss of, or alteration to, key mature landscape elements and characteristic features; • or introduce elements considered uncharacteristic of the area; • or a major deterioration in the character and amenity of the view in terms of perceptual qualities; • or where the proposals would result in a significant deterioration or dominant element to close or medium distance views; • or more notable change in more distant views, considering the character and amenity of the view from the range of visual receptors.
Moderate	<p>Some change to the landscape elements, key characteristic features and perceptual qualities. Moderate or major change to static or kinetic, partial view. Some change to the landscape elements, key characteristic features and perceptual qualities.</p> <p>Moderate positive effect: Moderate or major change to static or kinetic, partial view. Where the proposals would cause a moderate enhancement to the key landscape elements or characteristic features; or introduce elements considered in part characteristic of the areas; results in a noticeable improvement in the character and amenity of the existing view from a range of visual receptors and range of distances.</p> <p>Moderate negative effect: Where the proposals would cause partial loss of or moderate alteration to some of the key landscape elements and characteristic features; or introduce elements considered in part uncharacteristic of the area; results in a noticeable deterioration in the character and amenity of the view from the range of visual receptors and range of distances.</p>
Minor	<p>Some change to the townscape elements, key characteristic features and perceptual qualities; Minor change to a static or kinetic, partial or glimpsed view.</p> <p>Minor positive effect: Some change to the townscape elements, key characteristic features and perceptual qualities; Minor change to a static or kinetic, partial or glimpsed view. Where the proposals would result in a minor enhancement, alteration or improvement of some elements or characteristic features; introduce elements considered characteristic; and cause a barely perceptible improvement in the character and amenity of the existing view for the range of receptors and range of distances.</p> <p>Minor negative effect: Where the proposals would cause a minor loss of or slight alteration to some landscape elements or characteristic features; introduce elements considered in part uncharacteristic of the area; and a barely perceptible deterioration in the character and amenity of the view from the range of visual receptors and range of distances.</p>
Negligible	Where the proposals would have no discernible deterioration or improvement in the existing baseline situation in terms of landscape elements or view.
Neutral	Where the proposals would result in no change overall (resulting in no net positive or negative effect).

1.52 Effects which are Moderate and above are considered significant in EIA terms.

Effects During the Construction Phases

1.53 The initial effects arise from the OMSSD project enabling, demolition and construction works.

Sources of landscape and visual effects are considered to include:

- The implementation of the OMSSD project access and haulage routes (if different from the existing routes);
- The movement of materials and plant machinery around the OMSSD project area;
- The removal of vegetation to facilitate OMSSD project access and establish the proposed development platforms;
- The origin and nature of materials stockpiles, stripping of material and cut and fill operations / disposal and construction compounds;
- The movements associated with the disposal and recycling of wastes and residues;
- The construction equipment and plant;
- The provision of utilities, including lighting and any temporary facilities;
- The increase in levels across the OMSSD project area to create development platforms, above the flood risk level;
- The measures for the temporary protection of existing features (such as vegetation, trees, ponds, etc) and any temporary screening (such as hoarding lines); and
- The phasing of construction.

Effects at Completion and During Operation Phase

1.54 At the operational stage, the sources of landscape and visual effects include:

- The location, scale, height, mass of new built form and structures and green infrastructure;
- Access arrangements in terms of the proposed road corridors and the associated traffic movements;
- Car parking;
- Lighting strategy for the Proposed Development;
- Outdoor activities that may be visible;
- Any additional landscape measures; and
- Land management operations and objectives.

Mitigation Measures

1.55 The purpose of mitigation is to avoid, reduce and where possible, remedy or offset, any significant (major to moderate) negative effects on the landscape and visual receptors arising from the Proposed Development.

1.56 For the purposes of the assessment for the OMSSD project, primary and secondary measures have been included in the iterative design process to address negative effects wherever possible, such as changing the form of development; reducing building heights; together with considering standard construction and operational management practices for avoiding and reducing environmental effects, such as the location and colour of contractor's cabins.

Residual Effects

1.57 The residual effects of the Proposed Development therefore relate to the assessment of the

effects arising from the use of visually recessive materials and materials which are characteristic of the local area; together with considering the development at Year 15 relative to the maturation of any landscape proposals.

Cumulative and In-combination Effects

- 1.58 Cumulative effects are defined as effects which result from additional changes to the landscape and visual receptors by the proposed development in conjunction with other developments (associated with or separate to it) or actions that occurred in the past, present or likely to occur in the foreseeable future.
- 1.59 The scope of the developments to be included in the cumulative assessment are to be agreed with the Statutory Consultees by the consultants co-ordinator. Prescribed approaches to the assessment, in terms of the baseline environment and defining the study area, are to be relative to the developments identified to be assessed.
- 1.60 Cumulative effects arise from the inter-visibility of a range of developments and/or from the combined effects of individual components of the proposed development occurring in the different locations over a period of time. The separate effects of such individual components or developments may not be significant, but together they may create an unacceptable degree of adverse effect on landscape and visual receptors.
- 1.61 Whilst the effects are to be assessed on the same basis as set out previously in this methodology, visual effects occur by combined visibility which occurs where the observer is able to see two or more developments from one viewpoint and / or, where sequential effects which occur when the observer has to move to another viewpoint to see different developments.