

Elsham Tech Park

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Review of Landscape and Visual Impact Assessment

First Issue

North Lincolnshire Council

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Tetra Tech 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

Tetra Tech Limited. Registered in England number: 01959704

Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

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1.0 INTRODUCTION

1.1 BACKGROUND

- 1.1.1 Tetra Tech was instructed by North Lincolnshire Council to review the Landscape and Visual Impact Assessment (LVIA) prepared by MHP Design Ltd, dated May 2025 for the outline application relating to proposed Elsham Tech Park, an approx. 849,587 sqm technology park at a site to the immediate east and south east of Elsham Wolds Industrial Estate.

1.2 SCOPE OF THE REVIEW

- 1.2.1 The scope of work involved review of the LVIA in accordance with the Landscape Institute's Technical Note Guidance on Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs) (LI, January 2020)¹. The guidance provides a framework for undertaking reviews of LVIAs and LVAs and identifies the main components of the review as follows:
- Step 1: Checking the methodology used to undertake the assessment, the criteria selected (including balance between), and the process followed;
 - Step 2: Checking the baseline, content and findings of the assessment; and
 - Step 3: Checking the presentation of the assessment findings.
- 1.2.2 The above components are used to structure the review along with a checklist of questions provided in the technical note guidance for consideration.
- 1.2.3 This review is provided as a short report with the checklist findings and an overall conclusion of the findings.
- 1.2.4 The review was carried out by Chartered Landscape Architects experienced in undertaking and reviewing landscape and visual impact assessment.
- 1.2.5 The review process involved desk based review along with a site visit to check the baseline information including viewpoint information and the findings of the assessment. The site and surrounding area were visited by a Chartered Landscape Architect on 18th June 2025 and the large majority of the assessment viewpoint locations were visited. The Viking Way as it passes the site was also walked.

¹ Landscape Institute Technical Guidance Note, Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs) Technical Guidance Note 1/20 (10 Jan 2020) on LI website: <https://landscapewpstorage01.blob.core.windows.net/www-landscapeinstitute-org/2020/01/20-1-Reviewing-LVIAs-and-LVAs-Final.pdf> [accessed June 2025]

2.0 REVIEW CHECKS

2.1 STEP 1. CHECKING METHODOLOGY, CRITERIA AND PROCESS

Table 2-1 Checking Methodology, Criteria and Process

Question no.	Review question	Review comments
a)	Does the scope of the assessment meet the requirements set out in the Scoping Opinion and/or as defined in the LVIA or LVA and if substantively different, are the reasons clearly set out and explained?	Not applicable as the Planning Statement submitted with the planning application refers to the Screening Opinion (ref: PA/SCR/2025/5) from the Local Planning Authority (LPA) confirming that an Environmental Impact Assessment (EIA) would not be required for the proposed development.
b)	What consultations have been carried out and have responses been acted upon?	The LVIA (para. 1.5.4) and its Appendix A Assessment Methodology (section 1.2), refers to liaison undertaken with the LPA to agree viewpoint photograph locations, which included a meeting with the LPA. Confirmation has been received from North Lincs Council that Tetra Tech’s pre app response was issued to MHP for consideration. The pre app response was in relation to a selection of plans from the LVIA provided by MHP illustrating viewpoint locations and ZTVs. MHP also provided their LVIA methodology for comment. We consider that our response has partly been taken on board or addressed. No correspondence was received with regards to the agreement of photomontage locations.
c)	Has the scope and methodology of the assessment been formally agreed with the determining authority? If not, why not?	The LVIA does not specifically state if the scope and methodology of the assessment was formally agreed with the determining authority. However, North Lincs Council have confirmed that Tetra Tech’s pre app response was issued to MHP as discussed at b) above. The LVIA Appendix A however includes the methodology used to identify and assess the landscape and visual effects which is based on Guidelines for Landscape and Visual Impact Assessment 3rd Edition, published by the Landscape Institute and the Institute of Environmental Management & Assessment (GLVIA3). GLVIA3 is the industry standard work on LVIA. The Appendix D Visualisations are based on GLVIA 3 along with the Landscape Institute Technical Guidance Note, Visual Representation of Development Proposals Technical Guidance Note 06/19 17 September 2019 which is the relevant industry standard for visualisations.

Question no.	Review question	Review comments
d)	<p>As part of the methodology, has the terminology been clearly defined, have the criteria to form judgements including thresholds been clearly defined and have any deviations from good practice guidance (such as GLVIA3) been clearly explained?</p>	<p>The terminology and criteria are defined in the LVIA Appendix A, Assessment Methodology and briefly explained in the LVIA text at section 1.5. Information on the digital terrain model used to prepare the ZTVs is also provided in the Appendix B Zones of Theoretical Visibility (ZTV). The Appendix D Verified Visualisations methodology is clearly explained and largely unambiguous. Clarification is required regarding the method of determining the GPS locations for the visualisations. See Table 2.3 e) for further details.</p> <p>There is a discrepancy between the methodology included in the LVIA (section 1.5) and the Appendix A Assessment Methodology as follows:</p> <ul style="list-style-type: none"> Different terms are used to define the visual magnitude of change, i.e. the LVIA methodology uses the term Medium-Low and Appendix A, Assessment Methodology uses the term Medium-Small. <p>There is a discrepancy between the models/method used to generate the Zone of Theoretical Visibility (ZTV) in the Appendix A Assessment Methodology and the model used to generate the ZTVs for the LVIA as included in Appendix B as follows:</p> <ul style="list-style-type: none"> The Appendix A Assessment methodology (Section 1.4) refers to bare earth modelling for the ZTV which does not consider screening from buildings, hedgerows and trees using digital terrain models (OS Landform DTM profile and OS Panorama DTM data) alongside Digital Surface Model (DSM) LiDAR data which does take into account land cover such as buildings, hedgerows and trees. The ZTVs at Appendix B are described as being based on 2m DSM LiDAR data and appear to consider building and vegetation height. This is useful in illustrating the theoretical visibility however, there is no evidence of a 'bare earth' ZTV for comparison and no information is provided on the heights of the existing features used in the ZTV. <p>Deviation from guidance relating to the viewpoint images relating to Viewpoints 33-35 from the A15 and A180 isn't explained in the LVIA.</p>
e)	<p>Does the assessment demonstrate a clear understanding and provide a separate consideration of landscape and visual effects?</p>	<p>Yes and the landscape and visual effects are considered separately.</p>

Question no.	Review question	Review comments
f)	Does the assessment demonstrate comprehensive identification of receptors and of all likely effects?	Overall, yes, the assessment provides a comprehensive range of both landscape and visual receptors. Regarding landscape and visual receptors, the ZTV at Figure 3 Appendix B refers to theoretical visibility up to 16 km, but within the legend it refers to each of the radii equating to 5 km. This requires clarification but it is assumed to be a typographical error. The LVIA refers to the study area being informed by the ZTV for both landscape and visual receptors (paragraphs 3.1.1 and 4.1.3 respectively) with the landscape study area being 8-10 km. However, a distance for the visual study area isn't provided. Therefore, there is a degree of uncertainty as to what study area was for the consideration of visual effects and why 16 km is considered appropriate for the ZTVs and the overall extent of the landscape baseline plans.
g)	Does the assessment display clarity and transparency in its reasoning, the basis for its findings and conclusions?	The LVIA does not provide a narrative explaining how the judgements have been reached for value, susceptibility and sensitivity of visual receptors, whereas a clear narrative is provided for landscape receptors. The LVIA also does not provide a clear reasoning with regards to the magnitude of change for both landscape and visual receptors. A brief justification is provided as an explanation of the effect assessed for each visual receptor, with limited justification provided for landscape receptors, however no demonstration of how the assessments of sensitivity and magnitude have been linked in determining the overall effect is provided.

2.2 STEP 2. CHECK THE BASELINE, CONTENT, AND FINDINGS OF THE ASSESSMENT

Table 2-2 Checking the baseline, content, and findings of the assessment

Question	Review question	Review comments
a)	What is the reviewer's opinion of the scope, content and appropriateness (detail, geographic extent) of both the landscape and the visual baseline studies which form the basis for the assessment of effects (supported by appropriate graphic such as ZTVs etc as appropriate)?	<u>LVIA chapter 2, Landscape Policy Context</u> National and local planning policy is referred to. References are made to an Area of Great Landscape Value (AGLV) to the north of the site and an Area of High Landscape Value (AHLV) is described as being located to the west of the site (para. 2.2.1), but these are not shown on any plans and a distance from the site is not provided for context. Further reference to the AHLV to the north of the site is made at para. 3.18.3 and at Table B para. 3.23.4. However, within the visual assessment it is acknowledged that the landscape is formerly designated AHLV (para 4.4.4 and 6.4.34), also in the summary and conclusions at paragraph 8.1.4.

Question	Review question	Review comments
		<p>The LVIA should make clear throughout the assessment that the AHLV designation is no longer relevant and amend the reference to the former AGLV to the north of the site.</p> <p><u>LVIA chapter 3, Landscape Baseline</u> The identification of national land local landscape character is extensive, and consideration of receptors is thorough. It could be made clearer with regards to extent of vegetation removal, it's a little difficult to read on the landscape strategy plan.</p> <p><u>LVIA chapter 4, Visual baseline</u> Receptors likely to be influenced by the development are discussed and a comprehensive set of viewpoint plans is provided in Appendix C. Viewpoints cover a range of receptors including local residents, users of Public Rights of Way and road users.</p> <p>There are discrepancies in the LVIA relating to some viewpoint locations and the representation visualisation location as follows:</p> <ul style="list-style-type: none"> • Viewpoints 6 and 10 are shown at a different location on Figure 3, Appendix 3 than the viewpoint location used for the visualisation from viewpoints 6 and 10 as shown in Appendix 5; and • Viewpoint 17 appears to be marked at a differing location on the viewpoints plan at Figure 3 Appendix 3 to the viewpoint used for the viewpoint 17 visualisations at Figure 19 Appendix 5. The plan should be updated to the correct location. <p>Following a site survey carried out to inform this review, it is noted that there are a limited number of visual receptors that are located within 2 -2.5 km of the site that are not represented by viewpoints in the LVIA including:</p> <ol style="list-style-type: none"> i) Residents at Wooton Grange and Medley Cottage (access to and from the properties in particular); and ii) Residents at Dale Farm Cottages. <p>The above receptors are likely to be affected by the proposals at the site so they should be considered in the assessment of effects to ensure that the proposed mitigation sufficiently reduces any likely adverse effects. Additional viewpoint photography may not be necessary to provide this further consideration but the receptors should be acknowledged and assessed where necessary</p> <p>Regarding the photography at Appendix C, it would have been useful and more appropriate to have the site centred in the images, rather than focus on including the existing Elsham Industrial Estate in the view. Whilst the existing industrial estate</p>

Question	Review question	Review comments
		<p>provides context, having this included more central in the view, rather than focus on the site centre itself, skews the extent of the view occupied by the site within the single frame views, particularly for close visual receptors.</p> <p>There is no panoramic context photograph for Viewpoint 1 as shown at Appendix 3, which should be included to be consistent. Figure 68 – Single Frame View. The box does not correlate to the extent of the view at Figure 67.</p>
b)	<p>Has the value of landscape and visual resources been appropriately addressed (including but not necessarily limited to) considerations of: local, regional and national designations; rarity, tranquillity, wild-land and valued landscape?</p>	<p><u>Value of landscape resources</u></p> <p>The LVIA refers to national and local designations in sections 2 and 3. Paragraph 1.6.6 of the LVIA refers to Appendix C for local designations.</p> <p>The methodology includes consideration of Listed Buildings, Conservation Areas, Scheduled Monuments and Registered Parks and Gardens in the desktop study. Listed Buildings, Conservation Areas and Scheduled Monuments are not further considered in the LVIA but the presence of a Grade II listed barn immediate west of the site is referenced. Brocklesby Park Registered Park and Garden is situated within the study area, approx. 7.5 km to the south east of the site (BROCKLESBY PARK, Kirmington - 1000971 Historic England) and has been considered as a visual receptor (Viewpoint 25). Ecological designations also indicate landscape value and are referenced in the LVIA at para. 2.2.4. In addition, the findings of the Arboricultural Assessment is referenced at para 2.2.5. The Agricultural Land Classification (ALC) for the study area is shown at Figure 7 in Appendix C, but is not referred to further within the LVIA to inform the landscape value of the site. Although not assessed within an LVIA, the historic and ecological designations should all be considered to inform the landscape value.</p> <p>Chapter 2 of the LVIA addresses the landscape value of the site in detail with reference to the findings of other site based studies as mentioned above that inform the site’s landscape value. The LVIA briefly explains how the judgement is made regarding the value of other landscape receptors, i.e. the value confirmed for receptors in Table B at paragraph 3.23.4. The value of the local landscape is discussed in Section 3 and it is recognised within the LVIA that the Lincolnshire Character Assessment suggests that the landscape in which the site is located should be considered to be designated as an Area of High Landscape Value. The LVIA recognises and reflects this local value.</p> <p>As discussed in a) above, there is some uncertainty with regards to the presence of designated Areas of High Landscape Value within</p>

Question	Review question	Review comments
		<p>the study area. It is noted that the Wold Villages Scarp Slope Areas of High Landscape Value (policy LC8-3) in the 2003 North Lincolnshire Local Plan is not a saved policy within the adopted Core Strategy and therefore clarification is required on the various references to AHLV/AGLV within the study area.</p> <p><u>Value of visual resources</u> The Appendix A Methodology describes the methodology for assessing views including making judgements on the value of views. The LVIA however does not explain how the judgements are reached for each of the receptors identified, i.e. the value confirmed for receptors in the paragraph 4.2.12 table.</p> <p>The value of landscape and visual resources is therefore not appropriately addressed.</p>
c)	Have the criteria to inform levels of sensitivity (both landscape and visual) and magnitude of change been clearly and objectively defined, avoiding scales which may distort reported results?	Yes, as set out in the Appendix A, Assessment Methodology.
d)	How well is the cross-over with other topics, such as heritage or ecology, addressed?	Cross-over with other topics such as heritage, ecology, arboriculture and ALC is briefly addressed in the LVIA.
e)	Is there evidence of an iterative assessment-design process?	The proposed development is described in chapter 1 of the LVIA and mitigation and enhancements are described in chapter 5. Chapter 1 para. 1.4.2 states that an iterative process has been undertaken, with inputs from other disciplines assisting in the iterative design development. The submitted Design and Access Statement provides further details of the design process.
f)	Is it clear how the methodology was applied in the assessment, e.g.: consistent process, use of terms, clarity in reaching judgements and transparency of decision-making?	Definitions of the criteria used in the assessment are in the Appendix A Assessment Methodology and section 1 of the LVIA. There is limited narrative provided in the LVIA however to demonstrate the reasoning behind some of the judgements made for value, susceptibility, sensitivity and magnitude of effects, particularly in relation to visual receptors. A brief justification is provided as an explanation of the effect assessed for each landscape and visual receptor however no demonstration is provided of how the assessments of sensitivity and magnitude have been linked in determining the overall effect.

Question	Review question	Review comments
		<p>The LVIA methodology refers to the significance of effects. However, determining the significance is only a requirement of EIA projects and therefore not relevant.</p> <p>There is a discrepancy between the terms used for Magnitude of Change in the Appendix A Methodology and the LVIA as explained in Table 2-1 Review comment d) above.</p>
g)	How appropriate are the viewpoints that have been used?	Refer to the review comment in Table 2-1, Question f) above regarding the extent of the study area. Refer to a) above regarding the discrepancies noted in the viewpoints and consideration of the residential receptors with likely views of the site. If there is no public access at the location, then consideration of the views and visual effects using desk top analysis should be provided.
h)	How appropriate is the proposed mitigation, both measures incorporated into the scheme design and those identified to mitigate further the effects of the scheme, and mechanisms for delivering the mitigation?	<p>The LVIA describes the development proposals in Chapter 1 and the proposed mitigation in Chapter 5. The proposed 10 m bund planted with woodland will provide long term visual screening or filtering to views of the development from receptors including those with direct and near distance views of the site. Further layers of linear woodland within the site would provide additional softening of the presence of development in the landscape.</p> <p>The extent of woodland proposed at the site is extensive. Whilst woodland is a feature of the baseline landscape, it tends to occur as copses or blocks within the arable field mosaic rather than continuous belts; narrow linear woodland tends to occur along the major road corridors in short sections. It is acknowledged that there will be a break in the woodland to allow for the easements for the two pipelines that pass through the site, and this will provide an opportunity for the views through the site. Further design iteration to create other view corridors through the site could be explored. It is also acknowledged that mitigation planting has been set back from the closest property to the site at Elsham Chalk Barn to maintain distance from the property rather than create short distance enclosure that goes against existing landscape character.</p> <p>No detail is provided for delivery and maintenance of the mitigation; this could be a reserved matter to be addressed at a later date.</p>
i)	What is the reviewer's opinion of the consistency and objectivity in application of the criteria and thresholds set out in the methodology for assessing the sensitivity of receptors, the magnitude of	There is limited narrative provided to explain and justify the overall judgements on value, susceptibility, sensitivity in relation to visual receptors and limited narrative regarding magnitude of change for all receptors. A brief justification is given for the judgement arrived at for the effects although no detailed rationale is provided for how the sensitivity and magnitude have been

Question	Review question	Review comments
	changes arising from the project, the degree/nature of effects, and the approach to judging the significance of the effects identified, in the case of EIA projects?	combined to arrive at the final effects. It is therefore difficult to comment on consistency and objectivity.
j)	What is the opinion on the volume, relevance and completeness of the information provided about the development or project including, where relevant, detail about various development stages such as construction, operation, decommissioning, restoration, etc.?	No phasing information is provided as the proposed scheme is not intended to be a set phased development. The LVIA includes appropriate stages for the assessment of effects. The stages include construction, the initial operational phase and when the mitigation has sufficiently established to achieve its objectives. Residual effects are stated to be at year 15.
k)	Does the document clearly identify landscape and visual effects which need to be considered in the assessment?	<p>The LVIA includes a thorough identification of landscape receptors which are considered in the assessment.</p> <p>Similarly, visual receptors are clearly identified and assessed. Clarification is required with regards to a small number of visual receptors in the locality of the site as identified at a) above.</p>
l)	Have levels of effect been clearly defined and, in the case of LVIA, have thresholds for significance been clearly defined and have cumulative landscape and visual effects been addressed?	<p>The levels of effect are defined but narrative to fully explain the separate judgements about the sensitivity of the receptors, the magnitude of effects and the combination of the two to arrive at the overall effect could be clearer.</p> <p>The identification of cumulative effects is very brief. It is not clear why the developments mentioned in the LVIA have been chosen to be considered as part of a landscape and visual cumulative effects assessment. The cumulative assessment discusses effects with existing buildings within Elsham Wold Industrial Estate and other existing large scale buildings, but these form part of the baseline and as such are already assessed as part of the landscape and visual appraisal so should not be addressed as part of the cumulative assessment.</p>

2.4 STEP 3. CRITIQUE OF THE PRESENTATION OF THE FINDINGS OF THE ASSESSMENT

Table 2-3 Critique of the presentation of the findings of the assessment

Question no.	Review question	Review comments
a)	Does the LVIA/ LVA display transparency, objectivity and clarity of thinking, appropriate and proportionate communication of all aspects of the assessment of landscape and visual effects, including cumulative effects.	No, for the reasons set out in the Tables 2-1 and 2-2 above.
b)	Have the findings of the assessment been clearly set out and are they readily understood?	The findings are set out in tables for each receptor identified although no clear narrative is provided to explain and justify the overall judgements on value, susceptibility and sensitivity of visual receptors, and magnitude of change with regards to both landscape and visual receptors. A brief justification is given for the judgement arrived at for the residual landscape and visual effects although no detailed rationale is provided for how the sensitivity and magnitude have been combined to arrive at the final effects. With regards to the final effects, Year 1 operational effects are not discussed in detail, rather residual effects (Year 15) form the basis of the judgement. This weights the findings of the report towards the long term effects, which are heavily reliant on the success of the landscape mitigation.
c)	Has there been clear and comprehensive communication of the assessment, in text, tables and illustrations?	No, for the reasons set out in the Tables 2-1 and 2-2 above.
d)	Are the graphics and/or visualisations effective in communicating the characteristics of the receiving landscape and visual effects of the proposals at agreed representative viewpoints?	Viewpoint photographs are provided in Appendix C from viewpoints representing the range of receptors identified. There is some minor inconsistency between the viewpoint photographs and viewpoint locations as described in Table 2-2 above. The photographs aren't completely centred on the site for some locations and therefore don't fully represent the extent of the baseline. Visualisations of the proposed development from a variety of locations are provided in Appendix D. The visualisations effectively communicate the landscape characteristics and likely visual effects of the proposed development.
e)	Are the graphics and/or visualisations fit for purpose and	Notwithstanding the review comment in d) above the viewpoint photographs appear compliant with industry guidance. The visualisations of the proposed development are provided in

Question no.	Review question	Review comments
	compliant with other relevant guidance and standards?	<p>Appendix D from a variety of viewpoints and include a clear and unambiguous methodology and appear overall to be compliant with the industry guidance. However, the following points are noted:</p> <ul style="list-style-type: none"> • The tree growth appears too great and too mature for 15 years rather it appears to be a well-established woodland. The methodology states that the maximum tree height shown is 12 m. It is our opinion that this is too optimistic. • The Year 1 planting on the landform/screening bund looks potentially too sparse. Also query whether the fence should remain at Year 15 (Figure 18). • The Year 1 visuals show some very small plant sizes being implemented but its not made clear the planting size that they are planted at i.e. transplant, whip, etc. Similarly, for the proposed trees, what is the assumed size? Such information would allow a better understanding of the whether the landscape mitigation at Year 15 can actually be achieved. • The visualisation images are not presented to the LI current guidance (e.g. two 90 degree images on an A3 sheet – the sheet should be A1 wide by A3 height with one image per sheet). It is acknowledged that the methodology states that A1 versions are available on request. • With regards the technical information provided on each sheet, the dimensions of each image and the page size should be stated. The principal viewing distance is also omitted. Direction is given as a compass point rather than as the angle from north. • The stated camera location is very precise. Clarification is required as to how was this recorded (e.g. GNSS, handheld GPS, or on-board camera GPS) If it is the latter, it is optimistic to record location to 3 decimal points. <p>It is also noted that landscape character types are not shown on Figure 9.</p>
f)	Is there a clear and concise summation of the effects of the proposals?	<p>The LVIA provides a summary and conclusions although it is not completely clear how the summarised effects are arrived at without the rationale provided in the main assessment as commented on above.</p>

3.0 REVIEW FINDINGS

3.1.1 A summary of the LVIA review findings provided below.

Methodology

- The assessment methodology as set out in Appendix A of the LVIA is based on Guidelines for Landscape and Visual Impact Assessment 3rd Edition, published by The Landscape Institute and the Institute of Environmental Management & Assessment (GLVIA3). This is the appropriate industry standard work on LVIA. The Appendix D Visualisations are based on GLVIA 3 along with the Landscape Institute Technical Guidance Note, Visual Representation of Development Proposals Technical Guidance Note 06/19 17 September 2019 which is the relevant industry standard for visualisations.
- The LVIA and Appendix A Assessment Methodology use different terms to define the visual magnitude of change, i.e. the LVIA methodology uses the term Medium-Low and Appendix A, Assessment Methodology uses the term Medium-Small.
- There is a discrepancy between the models/method used to generate the Zone of Theoretical Visibility (ZTV) in the Appendix A Assessment Methodology and the model used to generate the ZTVs for the LVIA as included in Appendix B.

Landscape Baseline

- The landscape baseline appears thorough with a clear defined study area used to inform the assessment. A clear narrative is provided for judgements on value, susceptibility and sensitivity of receptors. There is some confusion regarding the presence of Area of Great/High Landscape Value within the study area and this should be reviewed.

Landscape Effects

- The LVIA provides judgements on susceptibility, sensitivity and magnitude of change. It is made clear how the judgements on sensitivity and susceptibility have been arrived at, but the magnitude of change judgement isn't explained in as much detail. A brief justification is given for the judgement arrived at for landscape effects although no detailed rationale is provided for how the sensitivity and magnitude have been combined to arrive at the final effects.
- Year 1 operational effects are not discussed in detail, rather residual effects (Year 15) form the basis of the judgement set out within the assessment tables. This weights the findings of the report towards the long term effects, which are heavily reliant on the success of the landscape mitigation. It should be made clear in the assessment that the significance provided (although not required for a non EIA project) is a residual significance.
- The assessment of effects for the landscape receptors appears to be an appropriate outcome based on the information provided and following site observations, however, there is insufficient justification provided to support some of the assessment outputs given.

Visual Baseline

- With regards to ZTVs, Appendix A Assessment Methodology refers to bare earth modelling for the ZTV which does not consider screening from buildings, hedgerows and trees using digital terrain models (OS Landform DTM profile and OS Panorama DTM data) alongside Digital Surface Model (DSM) LiDAR data which does take into account land cover such as buildings, hedgerows and trees. The ZTVs at Appendix B are described as being based on 2 m DSM LiDAR data and appear to consider building and vegetation height. This is useful in illustrating the theoretical visibility however, there is no evidence of a 'bare earth' ZTV for comparison and no information is provided on the heights of the existing features used in the ZTV.
- The LVIA discusses the visual receptors likely to be influenced by the development and a viewpoint plan is provided in Appendix C. Viewpoints cover a range of receptors including local residents, users of Public Rights of Way and local roads. In general, the viewpoints are appropriate, but the number of viewpoints assessed could have been refined; a 16 km study area is a very large area to consider and there are several viewpoints that are very similar (i.e. viewpoints along the Viking Way). However, it is acknowledged that such a study area has been selected to represent views from the Lincolnshire Wolds National Landscape. It is noted that there are a limited number of visual receptors that are located within 2 -2.5 km of the site that are not represented by viewpoints in the LVIA, as detailed Table 2.2 a) above and these should be considered in the assessment of effects to ensure that the proposed mitigation sufficiently reduces any likely adverse effects on these receptors.
- Regarding the photography at Appendix C, it would have been useful and more appropriate to have the site centred in the images, rather than focus on including the existing Elsham Industrial Estate in the view. Whilst the existing industrial estate provides context, having this included more central in the view, rather than focus on the site centre itself, skews the extent of the view occupied by the site within the single frame views, particularly for close visual receptors. A review of the single frame views should be carried out to make sure that the extent of the view matches that shown on the panoramic photographs.
- There is no panoramic context photograph for Viewpoint 1 as shown at Appendix 3, which should be included to be consistent.
- There are some minor discrepancies in the viewpoint mapping of a small number of locations and photographs used for the viewpoints. It is also noted that there are a small number of viewpoints that do not equate to the same location as the respective visualisations.
- No rationale is provided for the judgements on value made for the visual receptors.

Visual Effects

- The LVIA provides judgements on susceptibility, sensitivity and magnitude of change although there is little explanation for how these are arrived at. A brief justification is given for the judgement arrived at for visual effects although limited rationale is provided for how the sensitivity and magnitude have been combined to arrive at the final effects.

- The year 1 operational effects are not discussed in detail, instead residual effects (Year 15) form the basis of the judgement as set out within the assessment tables. This weights the findings of the report towards the long term effects, which are heavily reliant on the success of the landscape mitigation. It should be made clear in the assessment that the significance provided (although not required for a non EIA project) is a residual significance.
- The visualisations of the proposed development are provided in Appendix D from a variety of viewpoints and include a clear and unambiguous methodology and appear overall to be compliant with the industry guidance. However, a number of points are noted including (see Table 2.3 e) for all details):
 - The tree growth appears too great and too mature for 15 years rather it appears to be a well-established woodland. The methodology states that the maximum tree height shown is 12 m. It is our opinion that the vegetation shown should be at least 2 m less in height for those planted as heavy standard and a height of 7.5-8 m for those planted as transplants;
 - The Year 1 planting on the landform/screening bund looks potentially too sparse (page 12). Also, query whether the fence should remain at Year 15 (page 22); and
 - The stated camera location is very precise. Clarification is required as to how was this recorded (e.g. GNSS, handheld GPS, or on-board camera GPS) If it is the latter, it is optimistic to record location to 3 decimal points.
- Overall, the assessment of effects for the visual receptors appears to be an appropriate outcome based on the information provided and following site observations, however, there is insufficient rationale provided to support the assessment outputs stated.

Mitigation

- Whilst landscape mitigation has been considered in terms of planting and bunding, the colour of the proposed buildings should also be considered so that the best 'colour fit' is identified for the landscape character of the location, particularly as the built form will occupy ridgeline locations as seen from mid range locations. An Environmental Colour Assessment in line with the Landscape Institute Technical Guidance Note 04/2018 (November 2018) could be used as a tool to assist the decision making process.
- In order to understand whether the proposed planting is likely to provide the level of screening as depicted in the visualisations, information should be provided on the size of the proposed planting at implementation.

Cumulative

- The identification of cumulative effects is very brief. It is not clear why the developments mentioned in the LVIA have been chosen to be considered as part of a landscape and visual cumulative effects assessment. The cumulative assessment discusses effects with existing buildings but these form part of the baseline environment and as such are already assessed as part of the landscape and visual appraisal. The cumulative assessment should be reviewed and amended.

3.1.2 A summary of the findings of the presentation of the assessment is provided below:

- The LVIA is presented with separate sections for landscape and visual assessment. Notwithstanding the comments provided above regarding the scope and assessment, the LVIA includes a suite of ZTV's to illustrate theoretical visibility, identifies receptors and provides assessment tables for each of the receptors listed. Viewpoint photographs are provided along with visualisations of the development proposals and these help to communicate the baseline and with review of the assessment.

3.1.3 As identified above following review of the assessment methodology, the assessment scope and the assessment itself there are discrepancies in the LVIA along with items that are not fully addressed. These are summarised below along with further information required:

- There are discrepancies between the terms used in the LVIA and Assessment Methodology and the method used to prepare the ZTV;
- There are a few discrepancies relating to the viewpoint locations alongside the corresponding visualisation locations;
- The assessment does not provide sufficient rationale on how the judgements have been reached on susceptibility, sensitivity and magnitude of change for visual receptors and magnitude of change for landscape receptors, and how the levels of sensitivity and magnitude of change have been combined to arrive at both landscape and visual effects;
- The findings of the landscape and visual assessment tables are weighted towards residual effects (year 15) which is heavily reliant on the success of the landscape mitigation proposals. The landscape visualisations provided to accompany the year 15 assessment also exaggerate the likely growth of the year 15 planting; and
- The cumulative assessment is very brief and incorrectly assesses existing development in the baseline environment and therefore is not appropriately addressed.

3.1.4 It is recommended that the items raised above are addressed so the LVIA can be easily followed and makes clear the judgements made in the assessment, to allow for an informed planning decision.

4.0 SUMMARY AND CONCLUSION

- 4.1.1 Tetra Tech was instructed by North Lincolnshire Council to review the Landscape and Visual Impact Assessment (LVIA) for the proposed Elsham Tech Park, an approx. 849,587 sqm technology park at a site to the immediate east and south east of Elsham Wolds Industrial Estate.
- 4.1.2 The review was undertaken by Chartered Landscape Architects experienced in undertaking and reviewing Landscape and Visual Impact Assessments.
- 4.1.3 The review involved a desk based review of the LVIA and supporting documents along with a visit to the site, study area, and the majority of the assessment viewpoints.
- 4.1.4 A review of the LVIA has been undertaken as set out at Section 2 and the review findings are set out at Section 3. Whilst some drafting discrepancies and errors have been identified, overall, the assessment of effects for identified receptors appears to be an appropriate outcome based on the information provided and following site observations. However, there is insufficient rationale provided to support the assessment outputs given, particularly in relation to visual receptors. The year 15 assessment outcome is also heavily reliant on the successful establishment of the proposed landscape mitigation and methods to secure such success should be agreed.
- 4.1.5 To conclude, the LVIA assesses the likely effects on the local landscape context as substantial moderate adverse and moderate adverse in the long term, with long term moderate adverse visual effects experienced by receptors in the locality of the site, aside from receptors at Elsham Chalk Barn where a long term substantial moderate adverse effect is assessed as likely. Taking into account the proposals for a proposed development of this scale in a landscape of medium sensitivity, this appears to be an appropriate assessment for this location. The proposed development is large in scale and massing and will form a large visual presence in the landscape with mitigation planting taking time to provide any screening. The planting proposals themselves are likely to alter the landscape character of this area. Sensitive selection of colours for the building should be carried out to reduce its presence in the view and allow it to assimilate better into the surrounding landscape. Details of planting proposals should be agreed in advance to agree species and size at implementation, and advanced planting should be considered prior to development construction to allow the planting time to become established in advance of the works.

5.0 REFERENCES

- Landscape Institute Technical Guidance Note, Reviewing Landscape and Visual Impact Assessments (LVIAs) and Landscape and Visual Appraisals (LVAs) Technical Guidance Note 1/20 (10 Jan 2020);
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