



Northfleet Harbourside

Response to Avison Young Independent Environmental Statement Review Report



Northfleet Harbourside – Response to Avison Young Independent Environmental Statement Review Report

This note contains responses (where relevant) to the Avison Young Independent Environmental Statement Review Report, received on 28th July 2023. This response is split out into the following tables:

- Table 1: Independent Review of Volume 1: Environmental Statement Main Report (Chapters 1 – 5);
- Table 2: Independent Review of Volume 1: Environmental Statement Main Report (Chapter 6 – 18);
- Table 3: Independent Review of Volume 2: Townscape and Visual Impact Assessment; and
- Table 4: Review of the Non-Technical Summary.

This note provides further clarification in response to the comments raised by Avison Young but does not change or affect the conclusions of the EIA, which remain valid. This response is provided in line with the format of the respective comments from Avison Young, on a topic-by-topic basis.

Table 1: Independent Review of Volume 1: Environmental Statement Main Report (Chapters 1 – 5)

Section Paragraph number within the ES	Independent Review Comment(s) / Observation(s)	Red / Amber / Green (RAG) Rating	Additional Information / Clarification Request	Applicant Response
Chapter 1: Introduction				
Competent Experts and Relevant Experience: Para 1.29 and Appendix: Introduction Annex 1	Annex 1 presents the evidence of the competency of the EIA team, ES authors and contributors. This list does not include details of competency for the author of the Waste Assessment which was requested to be scoped in by GBC in their Scoping Opinion.		Please provide evidence of competency for the author of the Waste Assessment.	The ES did not include a waste assessment, and although requested to be scoped in by GBC as part of the Scoping Opinion, the rationale for this remaining a 'scoped out' topic was set out within the ES (ES Volume 1, Chapter 2: EIA Methodology). Whilst the ES must conform with the Scoping Opinion, the Applicant discussed and agreed the approach to be taken with the GBC (Genna Henry) with regards to continuing to 'scope out' waste at a meeting on



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				22nd September 2022 and subsequently set this out in the ES. Therefore, no waste statement of competence is deemed required.
Chapter 2: EIA Methodology				
Response to the Scoping Opinion – Waste and Materials (Paragraph 2.72)	Part of the justification for why a separate Waste and Materials ES Chapter was not prepared is that the Applicant will commit to the preparation of a Site Waste Management Plan (SWMP). There is also a commitment to adhere to a defined Procurement Strategy in accordance with The Green Guide to Specification, to be secured by condition.		GBC to note requirement for planning conditions.	No response required.
Response to the Scoping Opinion – Waste and Materials (Paragraphs 2.71 – 2.75)	The scoping opinion identifies the potential for a significant effect from the operation of the proposal on waste and recycling facilities. Chapter 2 justifies why a separate Waste and Materials ES Chapter is not required. Was this approach agreed with GBC subsequent to the receipt of the Scoping Opinion and therefore is the ES in accordance with the most recent Scoping Opinion?		Please provide an audit trail with GBC confirming the agreed approach to assessing Waste and Materials.	The Applicant discussed and agreed the approach to be taken with the GBC (Genna Henry) with regards to continuing to 'scope out' waste at a meeting on 22 nd September 2022 and subsequently set this out in the ES (ES Volume 1, Chapter 2: EIA Methodology).



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Response to the Scoping Opinion – Waste and Materials (Paragraphs 2.71 – 2.75)	The Scoping Opinion specifically referred to the lack of available recycling centre capacity as one of the reasons that the topic of Waste and Materials should be scoped into the EIA. Whilst this section of the ES considers the available landfill capacity for residual waste (and consequently concludes that likely significant effects upon waste infrastructure during operation are not expected), it does not assess the impact of the Proposed Development on recycling centre infrastructure. It is therefore considered that the ES is not currently in accordance with the latest Scoping Opinion.		Please provide the requested assessment of the impact of the Proposed Development on recycling centre infrastructure.	An Outline Operational Waste and Recycling Management Strategy was prepared and appended to the ES (ES Volume 3, Appendix: Waste – Annex 1). The Outline Operational Waste and Recycling Management Strategy assesses the impact of the Proposed Development on recycling centre infrastructure. When considering the available waste management infrastructure capacity within the region and locally in Kent, the assessment established that the impacts of the waste arising from the Proposed Development will be negligible.
Response to the Scoping Opinion – Project Vulnerability, Major Accidents and Natural Accidents (Paragraphs 2.76 – 2.81)	The scoping opinion sets out a different scope to that included in the submitted ES as it adds project vulnerability. A separate chapter on project vulnerability is not provided in the ES, as justified in Paragraphs 2.76 – 2.81. Was this approach agreed with GBC subsequent to the receipt of the Scoping Opinion and therefore is the ES in accordance with the most recent Scoping Opinion?		Please provide an audit trail with GBC confirming the agreed approach to assessing project vulnerability.	The Applicant discussed and agreed the approach to be taken with the GBC (Genna Henry) with regards to Project Vulnerability, Major Accidents and Natural Disasters at a meeting on 22 nd September 2022. The agreed approach is detailed in ES Volume 1, Chapter 2: EIA Methodology.



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Chapter 3: Alternatives and Design Evolution				
Alternatives	As required by the EIA Regulations, Chapter 3 includes a description of the reasonable alternatives studied by the developer, including a comparison of the environmental effects. This is considered satisfactory.		N/A	No response required.
Figure 3.1 Existing Surroundings Built Form (Land Use and Height) Chapter 4: The Proposed Development Landscaping and Public Realm	It is observed that the legend on this Figure appears to be incorrect in terms of which buildings are the tallest. This makes interpreting the nature of the surrounding built form confusing at times.		Please correct the error in Figure 3.1.	The error has been corrected, with the revised figure appended to this Response Document (refer to Appendix A).
Chapter 4: The Proposed Development				
Landscaping and Public Realm	Paragraph 4.43 states that the Proposed Development will deliver a minimum of 0.5ha of allotments. However the Design Code states that a minimum of 0.32ha of allotments must be delivered.		Please clarify what is the correct quantum of allotments to be provided. Is the area of allotments quoted in Chapter 4 correct, if it is not how does this impact the ES assessments?	The correct minimum quantum of allotments to be provided by the Proposed Development is 0.5 hectares. The illustrative masterplan demonstrates a provision of 0.79 ha could come forward within the parameters sought for approval. The minimum of 0.32ha of allotments stated in the Design Code is incorrect, where what has been stated and assessed in the ES is correct.



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Maximum Development Parameters Scale and Massing	Figure 4.6 illustrates the 3D model of the maximum parameters sought for approval. Paragraph 4.31 states that there are limits of deviation with regards to building edge which vary from +/- 0.5m to +/- 5m. It is not clear whether the 3D model of the maximum parameters includes for the maximum limit of deviation.		Please confirm what the EIA has actually assessed in relation to the maximum built form parameters.	ES Volume 1, Chapter 2: EIA Methodology, paragraphs 2.34 – 2.47 sets out what has been assessed in terms of maximum and minimum parameters. The massing related technical studies of the EIA (wind microclimate; daylight, sunlight, overshadowing, solar glare and light pollution; and townscape and visual impact) undertook their assessment based on the maximum parameters 3D model which comprised the maximum massing associated with the maximum limits of deviation.
Embedded Mitigation - Wind Microclimate	It is stated that “any unsuitable wind conditions will be resolved through the detailed design of Plots 1-19 and detailed landscaping at the RMA stage. This is ensured through the following mandatory controls set out within the Design Code.....” However upon review of the Design Code we cannot identify where these mandatory controls have been detailed. We therefore query where in the ‘Control Documents’ this embedded mitigation has been provided.		Please confirm where this embedded mitigation has been included in the Design Code. If it is not in the Design Code can it therefore be relied upon as embedded mitigation?	Throughout the Design Code, the wind mitigation measures have been detailed with regard to amenity spaces, building entrances, residents amenity terraces, balconies, bus stops and off-site locations to ensure suitable wind conditions. These can be found at Part D: Detailing the Buildings: Sections 12.0 Residential – Key Design Objective, 12.5 Residential – Building Elements and Detailing and Section 13.0 – Hospitality of the Design Code and is considered adequate. It should be noted that the relevant mitigation is clearly set out within ES Volume 1, Chapter 11: Wind Microclimate and ES Chapter 18: Environmental Management, Mitigation and Monitoring Schedule, whereby it is stated that the LPA will need to secure these measures for the project, either using planning conditions on the Decision Notice, or through planning obligations secured by appropriate legal agreement(s). Please note that a Design Code Addendum has been prepared in response to the Avison Young ‘Northfleet Harbourside Masterplan Review’ document dated May



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				2023. To enable the document to be more user-friendly, the wind mitigation has been clearly set out in Part D: Detailing the Buildings, section 15.3: Wind Microclimate Mitigation. Furthermore, the ES states that further testing will be undertaken at Reserved Matters Stage to ensure wind conditions are suitable across the site. Additional wind testing at this stage will ensure any if and further mitigation and required, these measures are captured and incorporated into the Proposed Development.
Embedded Mitigation - Daylight, Sunlight, Overshadowing, Solar Glare and Light Intrusion	Paragraph 4.91 states that “Solar Glare effects will be considered in relation to Plots 2, 3, 4 and 6 and mitigation will include...”. The Design Code however refers to Solar Glare mitigation for Plots 2, 3, 4 and 5.		For clarity in ensuring mitigation is included at reserved matters stage please confirm which Plots need to consider Solar Glare through the detailed design process.	The reference to Solar Glare Mitigation for Plots 2, 3, 4 and 5 within the Design Code is incorrect. As noted in ES Volume 1, Chapter 4: The Proposed Development paragraph 4.91 solar glare mitigation will be considered in relation to Plots 2, 3, 4 and 6.
Embedded Mitigation - Water Consumption	It is not apparent where in the ‘Control Documents’ all of the stated embedded mitigation measures relating to minimising water consumption are located.		Please confirm where this embedded mitigation has been included in the ‘Control Documents’. If the mitigation measures are not located in the ‘Control Documents’ then how is it being secured and can it be therefore be considered as embedded mitigation?	The ‘Water Consumption’ section states “The Proposed Development focuses on demand reduction and includes the use of rainwater harvesting (as noted within the Design Code)”. Within the Design Code, measures relating to rainwater harvesting can be found in Part E Detailing the Place, Section 22.0 SuDS Drainage and Blue Infrastructure, which is considered adequate. It should be noted that the relevant mitigation is clearly set out within ES Volume 1, Chapter 5: Water Resources, Flood Risk, Drainage and Ground Conditions and ES Chapter 18: Environmental Management, Mitigation and Monitoring Schedule, whereby it is stated that the LPA will need to secure these measures for the project, either using planning conditions on the Decision Notice, or



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				through planning obligations secured by appropriate legal agreement(s). Please note that a Design Code Addendum has been prepared in response to the Avison Young 'Northfleet Harbourside Masterplan Review' document dated May 2023. Measures regarding rainwater harvesting can be found in Part E: Detailing the Place, Section 22.0: SuDS Drainage and Blue infrastructure of this document.
Chapter 5: Demolition and Construction				
Introduction, Management Plans, paragraph 5.5.	Paragraph 5.5 states that implementation of the CEMP and any other required management plans, will be secured and agreed with GBC.		GBC to note in relation to drafting planning conditions.	No response required.
Infrastructure Services, paragraph 5.29.	Paragraph 5.29 states that a detailed culvert survey will be undertaken at reserved matters stage and will be controlled by a suitably worded planning condition.		GBC to note in relation to drafting planning conditions.	No response required.
Substructure Construction Methodology, paragraph 5.34.	Paragraph 5.34 refers to the casting of basement slabs, however there is no reference to there being basements proposed in Chapter 4: The Proposed Development.		Please confirm whether basements are proposed, and if they are, confirm whether they have been assessed in the ES given their omission from the description of the Proposed Development in Chapter 4.	Basements are not proposed as part of the Proposed Development, and reference to basements within ES Volume 1, Chapter 5: Demolition and Construction is made in error. Paragraph 5.34 should read: <i>"Piling will be undertaken from a piling platform at the existing ground level. Excavation for below ground drainage, ground beams and pile caps will follow piling operations. Ground level slabs will then be cast."</i>



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Road Vehicle Numbers	Paragraph 5.71 and Figure 5.14 detail the predicted demolition and construction vehicles. However the data in Figure 5.14 does not appear to be consistent with what is written in paragraph 5.71. For example, for month 30 the graph appears to show a total of 107 HGVs per day, with an additional 21LGVs (a total of 128 vehicle movements per day). Whereas Paragraph 5.71 states an average peak of 107 HGV movements per day and a further 'worst case' 20% increase in HGV movements totalling 128 HGV movements per day. Paragraph 5.71 makes no mention of LGVs in the quoted figures.		Please confirm what the correct construction vehicle figures are and confirm whether the correct figures have been used throughout the ES.	The construction vehicle trip data stated within paragraph 5.71, and illustrated within Figure 5.14, are correct but open to interpretation. The graph offers a daily total of HGV's and LGV's, averaged over each month of the expected programme. As noted in ES Volume 1, Chapter 5: Demolition and Construction, the peak month 30 shows 107 HGV's arriving at and leaving site on a typical day that month, plus 21 LGV's. That equates to a total of 128 vehicles arriving at and leaving site on an average day, so 128 movements "in" and 128 movements "out". It is, however, impossible to forecast that each day will equate to a tidy average over the month. During structural works, for example, a site might choose to pour concrete on (say) Wednesdays and Fridays, after spending prior days preparing for the pour. Wednesdays and Fridays will have more traffic and will exceed the average number included in the graph. That is why the text offers a potential peak of 20% over and above the average figure. Furthermore, the text in paragraph 5.71 only refers to HGV's because HGVs are the higher number and therefore have the biggest impact. Application of the 20% would add 4 LGVs to the average figure.
Road Vehicle Numbers	Paragraph 5.71 and Figure 5.14 detail the predicted demolition and construction vehicles. The data does not appear to include the predicted number of non HGV/LGV vehicles, such as construction workers		Confirm why only HGV/LGV trips have been provided. Does the traffic data therefore allow for an accurate assessment of the impact of all construction phase vehicles on Traffic and Transport, Air Quality and Noise and Vibration?	The Outline CEMP (ES Volume 3, Appendix: Demolition and Construction – Annex 1) includes the statement: <i>"Operatives should be encouraged to come to work by public transport or cycle. Limited and managed parking will be permitted on site."</i> <i>Bike parking and showers should be provided on site."</i>



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	accessing the site for work by private car.			The site is well served by Northfleet Station as well as Swanscombe and Ebbsfleet International. The majority of construction operatives are expected to arrive by public transport. Certain key trades (groundworks and concrete frame erectors) are typically brought to site by minibus, and the LGV forecasts include an allowance for those. The Managed parking mentioned above would be limited to those.

Table 2: Independent Review of Volume 1: Environmental Statement Main Report (Chapters 6 - 18)

Section Paragraph number within the ES	Independent Review Comment(s) / Observation(s)	Red / Amber / Green (RAG) Rating	Additional Information / Clarification Request	Applicant Response
Chapter 6: Socio-Economics and Health				
Socio-Economics and Health Assessment Methodologies	The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Worst-case scenario, 10% reduction.	Paragraph 6.9 states that in line with assessing the worst case for employment generation, a 10% reduction has been applied to the outline non-residential elements. There is no reasoning to explain this		Please explain further why a reduction has been applied and why 10% has been chosen to represent the 'likely' case.	Given that the planning application does not seek approval for minimum parameters, in order to allow for a robust socio-economic assessment, assumptions were required with regards to establishing conservative, yet reasonable, minimum parameters for the purposes of assessment. A 10% reduction to the illustrative



	statement. This feels like an arbitrary number given that the planning application only states maximum parameters and not minimum parameters. In addition, paragraph 6.9 states that the same approach has been applied to the number of residential units. It is noted that an ES should assess the 'likely' environment effects rather than simply 'worst-case'. Given that the planning application only states maximum parameters and not minimum parameters it would be reasonable to assess the maximum as the 'likely'. Although we acknowledge that the 10% reduction is applied in the assessment to be conservative.			parameters was deemed suitable in this instance based on professional judgement with regards to the minimum parameters that could come forward as part of detailed design. These minimum parameters assumptions align with (i.e., fall within) the parameters sought for approval by the planning application, as defined by the Parameter Plans, Design Code and Planning Statement. This approach was agreed with the Applicant planning team and is one that has been taken on a number of other projects in establishing reasonable assumptions for the purposes of assessment for outline planning applications. For clarity, as set out within ES Volume 1, Chapter 6: Socio-Economics and Health, minimum parameters have been defined to allow for assessments relating to minimum residential accommodation provision, residential yield, and non-residential floorspaces. This has allowed for reasonable assessment scenarios regarding employment creation, business rates receipts, housing delivery, household expenditure and council tax receipts.
Baseline Conditions Secondary Schools	– Paragraph 6.66 and Table 6.10 state that there are two secondary schools within 2km of the Site, but Northfleet Technology is clearly located well beyond the 2km buffer shown on Figure 6.5, and is stated in Table 6.10 as being 2,428m from the Site. Therefore it is incorrect to state that there is available capacity for 130 pupils within 2km of the Site.		Please clarify whether this is an error, and what implications this has for the rest of the assessment.	Paragraph 6.66 and Table 6.10 of ES Volume 1, Chapter 6: Socio-Economics is incorrect. As shown in Figure 6.5, Northfleet Technology is located out with the 2km buffer. However, this will not affect the overall assessment at paragraph 6.117 and 6.118, which refers to the two nearest schools (rather than the schools within 2km). The assessment concludes that the nearest schools did not have sufficient capacity, and that demand for Secondary school places would need to be met by a range of schools across the two Boroughs. Furthermore, it was stated that the most appropriate way to address this would be through financial contributions, as would normally be required from a scheme of this nature.



Assessment of Effects - Open and Play Spaces	Table 6.19 calculates that 0.44 ha of allotments is required and refers to the illustrative masterplan provision of 0.79 ha. As stated above in the review of Chapter 4, Paragraph 4.43 states that the Proposed Development will deliver a minimum of 0.5ha of allotments and the Design Code (which is intended to be a Control Document) states that a minimum of 0.32ha of allotments must be delivered. It is noted that the quantum quoted in the Design Code is less than the 0.44ha required. It is also questioned why the illustrative provision is being used for the assessment when minimum provision is set out in the Control Document. Notwithstanding this there is inconsistency regarding how much allotment provision is being committed to.		Please confirm what the correct minimum quantum of allotment provision is, and confirm whether adequate provision for allotments is being committed to in the outline application to conclude that there will be negligible effects.	Table 6.19 calculates that 0.44 ha of allotments is required, whereby the planning application commits to the minimum delivery of 0.5ha. The illustrative masterplan demonstrates a provision of 0.79 ha could come forward within the parameters sought for approval. The minimum of 0.32ha of allotments stated in the Design Code is incorrect, where what has been stated and assessed in the ES is correct. Please note that a Design Code Addendum has been prepared in response the Avison Young 'Northfleet Harbourside Masterplan Review' document dated May 2023. The correct minimum allotment area sought for approval can be found in Part E: Detailing the Place, section 19.0 Productive Landscapes of this document. Please also note that the assessment (e.g., at paragraph 6.125 of ES Volume 1, Chapter 6: Socio-Economics and Health) is based on the minimum quantum sought for approval and not the illustrative provision, where it is stated <i>"Given that the Proposed Development has been demonstrated to be capable of meeting the minimum requirements, and that the planning application commits to meeting the required provisions, the Proposed Development will therefore have a neutral effect at the Local level on Community Infrastructure (Open Space). Receptor sensitivity is Medium, and magnitude of impact (in context of the commitment to meet the minimum levels of provision) is Negligible, meaning that the effect is assessed as Negligible (Not Significant)."</i>
Mitigation, Monitoring and Residual Effects - Population and Demand for Social Infrastructure	A financial contribution is proposed to mitigate the demand for primary and secondary school places.		GBC to note in terms of planning conditions or S106 as relevant.	No response required.



Chapter 7: Traffic and Transport

Traffic and Transport Assessment Methodologies	The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Traffic and Transport Assessment Methodologies	The assessment has been undertaken in accordance with the IEMA Guidelines for the Environmental Assessment of Road (Traffic 1993). IEMA issued replacement Guidance in July 2023.		Assessment to be reviewed against the requirements of the updated IEMA guidance.	The ES was prepared in 2022 and therefore prior to the issue of the July 2023 update. The revised IEMA guidelines build on the 1993 issue with additional focus placed on expanding the assessment categories for all users. Fundamentally the broad 'Rules' for assessment remain consistent. The threshold for assessing magnitude of impacts for Severance are considered to remain representative as are those for Driver Delay. Pedestrian Delay as assessed in line with the 1993 guidelines is updated to reflect all non-motorised users though the assessment methodology for pedestrians remains a proxy for the potential delay to other users and as such, the methodology adopted is considered representative, albeit other users are not specifically addressed. This is also reflected in the change from Pedestrian Amenity to Non-motorised users amenity. Whilst not referenced as a separate entity, non-motorised users crossing links would be subject to the same delays as pedestrians, with users travelling on roads likely to experience delays consistent, or less, than the forecast driver delays. Fear and Intimidation has a revised assessment criteria in the updated guidance which seeks to more specifically identify the degree of hazard, and subsequently identify the level of fear and intimidation. Given that the largest increase in HGV movements is 205 which (all other things being equal) would fall within the 'Low' impact category, it



				is not anticipated that any medium or high impacts would be identified.
Demolition and Construction Phase Vehicles	Paragraphs 7.34 and 7.35 set out the forecast number of HDVs associated with the demolition and construction of Phase 1 and Phase 2. There is no mention of the number of predicted non HDV vehicles, such as those associated with construction workers accessing the Site, or any explanation about why these have been excluded from the assessment. We therefore question whether the statement made in Paragraph 7.106 about the screening thresholds not being met or exceeded is correct when considering the impact of 'total vehicles'. Please note that the same comment applies to Assessment Scenario 2.		Please clarify why only HDV movements have been considered in the assessment and confirm whether the assessment against the IEMA Criteria is therefore robust.	The references made in paragraphs 7.34 and 7.35 are made specifically in consideration of the IEMA guidelines when assessing the magnitude of impact as these specifically refer to HDVs. We can confirm that all vehicles associated with the construction and demolition phase have been included within the assessment. The total numbers represent all vehicles associated with the demolition and construction phases, as set by the construction advisor. This presumes that all vehicles are LGVs or HGVs to safeguard impacts. We have further uplifted the total vehicle numbers by 20% to provide for a robust 'worst-case' deviation and also assume the peak single day is the normal day. This is applicable to both Assessment Scenario 1 and Assessment Scenario 2. The assessment against the criteria is therefore considered correct and robust for the purposes of assessment.
Mitigation, Monitoring and Residual Effects – Demolition and Construction Mitigation	Paragraph 7.197 states that implementation of the CEMP will be secured and agreed with GBC.		GBC to note in terms of planning conditions.	No response required.
Cumulative Effects Assessment	Paragraph 7.238 states that no additional likely significant cumulative effects have been identified during demolition and construction. However the preceding		Please provide justification for the statement that there will be no additional likely significant cumulative effects during demolition and construction.	The conclusion at Paragraph 7.238 that no likely significant effects would occur during demolition and construction was based upon the temporary nature of the Proposed Development demolition and construction effects, an assessment year of 2029 (i.e., coinciding with



	paragraphs do not consider the demolition and construction phase, so it is unclear on what basis the statement has been made as no assessment work has been undertaken.		Assessment Scenario 2, given that this represented the worst-case demolition and construction phase assessment scenario when considering the Phase 2 construction vehicles + Phase 1 operational trips), and the assumption that the relevant Tier 1 cumulative schemes in close proximity to the Proposed Development (that have the potential to have a cumulative effect upon relevant receptors when considered in-combination with the Proposed Development) would be built-out by this point and as such there would be no overlap of demolition and construction phases. With regards to the Tier 2 cumulative schemes, there may be the potential for a temporary overlap in construction programmes during the demolition and construction phases of the Proposed Development and relevant Tier 2 cumulative schemes, however, it is assumed that mitigation measures will be put in place for the cumulative schemes (as is required of the Proposed Development) to ensure no significant effects are experienced for the relevant receptors. Each development will be required to implement its own Construction Logistics Plan (CLP) and Construction Environmental Management Plan (CEMP) to ensure demolition and construction effects are limited, reduced, and managed appropriately. Considering the location of the cumulative schemes and the knowledge of the local highway network, the main cumulative effects could potentially occur along the A226, A2266 and B255. To ensure no adverse effects occur, construction logistics and routing will be agreed with the local council as necessary to ensure no significant adverse interactions between demolition and construction vehicles along key routes. With the appropriate mitigation in place (CLP, CEMP and traffic management measures agreed with the Council) it is considered no significant cumulative demolition and construction effects will occur with regard traffic and transport.
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Chapter 8: Air Quality					
Air Quality Assessment Methodologies		The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Impact assessment Methodology – Demolition and Construction Traffic		Paragraph 8.21 states that the demolition and construction phase of the Proposed Development will generate, on average, 205 HDV annual average daily trips (AADT) during the peak year of construction works (2026). This does not correlate with the HDV movements presented in Chapter 5 (Paragraph 5.71) and so we question whether or not the correct data has been used in assessing the impact of construction vehicle movements on air quality (Tables 8.10, Table 8.11 and 8.12).		Clarify why the traffic data quoted in Paragraph 8.21 is different to that quoted in Chapter 5 and confirm what the correct traffic data figures should be. Confirm whether the assessments presented in Tables 8.10, 8.11 and 8.12 have been based on the correct traffic data.	The peak number of construction traffic movements quoted in ES Volume 1, Chapter 5: Demolition and Construction refers to the peak month (month 30), whereas the number quoted in ES Volume 1, Chapter 8: Air Quality refers to the peak year (2026). The flows used in ES Volume 1, Chapter 8: Air Quality are derived from the same data set as discussed in ES Volume 1, Chapter 5: Demolition and Construction; thus, the results of the air quality assessment (presented in Table 8.10, Table 8.11 and Table 8.12) are based on the correct traffic data.
Potential Dust Emission Magnitude - Demolition		Paragraph 8.92 states that the demolition works are anticipated to be phased over 18 months however Chapter 5 states that demolition works in Phase 1 would last for 15 months, and demolition works in Phase 2 would be a further 6 months. There is therefore an inconsistency between the construction programme stated in Chapter 5 of the ES and the information used to undertake the assessment of dust emissions.		Please confirm if a longer demolition phase would result in any changes to the assessment as reported in Chapter 8.	A longer demolition phase would not alter the outcome of the construction dust risk assessment. The dust emission magnitude of all stages of the demolition and construction works are categorised as 'large' which is worst-case. The full suite of mitigation measures has therefore been recommended to ensure there will be no significant effects from the demolition and construction works.
Potential Dust Emission		Paragraph 8.95 states that earthworks will be phased over 4 years however we cannot see where		Please confirm where the 4 year duration has been derived from and	The 4-year duration is derived from the construction advisor. Based on the information provided, this part of the assessment is accurate. Regardless of the duration,



Magnitude Earthworks	–	this duration has been derived from in Chapter 5. There is therefore a potential inconsistency between the construction programme stated in Chapter 5 of the ES and the information used to undertake the assessment of dust emissions.		confirm if this part of the assessment is therefore accurate.	the dust emission magnitude of all stages of the demolition and construction works (including earthworks) are categorised as 'large' which is worst-case. The full suite of mitigation measures has therefore been recommended to ensure there will be no significant effects from the demolition and construction works.
Potential Emission Magnitude Trackout	Dust -	Paragraph 8.99 states that the peak number of construction vehicles will occur during month 30 of the construction programme, with an estimated 107 Heavy Goods Vehicle movements per day. Whilst this figure does align with the figures quoted in Paragraph 5.71 of Chapter 5, it does not include the 20% additional daily movements that Chapter 5 states could occur as a worst case.		Confirm why the assessment of trackout has not included the worst case peak daily movements, and therefore if the assessment is correct.	The number used in paragraph 8.99 is consistent with the number quoted in ES Volume 1, Chapter 5: Demolition and Construction. Regardless of whether there are an additional 20% of movements, the dust emission magnitude has been categorised as 'large' which is worst-case. The full suite of mitigation measures has therefore been recommended to ensure there will be no significant effects from the demolition and construction works.
Demolition and Construction Mitigation	and	Paragraph 8.118 and Appendix: Air Quality – Annex 7: Construction Mitigation, outlines Demolition and Construction Mitigation to be implemented through a Code of Construction Practice or the CEMP.		GBC to note in relation to drafting planning conditions.	No response required.
Demolition and Construction Mitigation	and	Paragraph 8.119 outlines Demolition and Construction Mitigation to be implemented through a Construction Logistics Plan (CLP).		GBC to note in relation to drafting planning conditions.	No response required.



Chapter 9: Noise and Vibration				
Noise and Vibration Assessment Methodologies	The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Assessment Methodology – Baseline Surveys	It is not clear from the Chapter whether or not the survey locations and monitoring methodology was agreed with GBC.		Please confirm if the baseline monitoring locations and methodology was agreed with the EHO at GBC.	The survey methodology, including positions, were included in the scoping report, and agreed through the Scoping Opinion.
Assumptions and Limitations	Paragraph 9.34 is incomplete.		Please confirm if information regarding the assessment assumptions and limitations is missing.	The incomplete paragraph appears as an error, no assumptions or limitations are missing.
Construction Time slices (in relation to assessment on early occupiers of the Proposed Development).	Plots 9 and 14 being occupied prior to the completion of the Phase 2 demolition and construction works is missing from the time slices listed under paragraph 9.45 and introduced receptors in Table 9.22.		How does this omission affect the assessment in Chapter 9?	The assessment is based on the noisiest stages of construction. When Plots 9 and 14 are occupied the noisiest stages (substructure and superstructure) of the phase 2 plots will have been finished. Therefore, this omission does not affect the conclusions presented in ES Volume 1, Chapter 9: Noise and Vibration, and they remain valid.
Construction Traffic	We have previously queried under the review of Chapter 5 whether or not the predicted demolition and construction vehicle movements should also include non HGV trips. Does the traffic data used in the assessment therefore allow for an accurate assessment of the impact of construction phase vehicles on noise at nearby sensitive receptors?		Confirm why only HGV/LGV trips have been provided and whether the traffic data therefore allows for an accurate assessment of the impact of construction phase vehicles on noise at nearby sensitive receptors.	The assessment of construction traffic in ES Volume 1, Chapter 9: Noise and Vibration was based on the information provided by Vectos, the project traffic consultants, and did not include non-HGV / LGV traffic associated with construction. It is the professional experience of the noise consultants (Sandy Brown) that the inclusion of non-HGV traffic is inconsequential and non-material to the findings of construction traffic assessments, and is therefore excluded. For example, the assessment presented in ES Volume 1, Chapter 9: Noise and Vibration includes the demolition and construction traffic in addition to the completed Phase 1 traffic of the Proposed Development (2029 D&C AS2), which includes increases in all vehicle types. This



				assessment indicates low or negligible changes in the noise level. As such, using professional judgement and based upon the data presented in ES Volume 1, Chapter 7: Traffic and Transport, an evaluation of the traffic data indicates no substantial change to the traffic noise during the construction phase if non-HGV flows were to be included. This is mainly a result of high baseline traffic flows. Therefore, the assessment presented in the ES chapter is considered to be robust.
Mitigation, Monitoring and Residual Effects – Demolition and Construction Mitigation	Paragraph 9.196 states that implementation of Best Practicable Means through the CEMP.		GBC to note in terms of planning conditions.	No response required.
Mitigation, Monitoring and Residual Effects – Demolition and Construction Mitigation	Paragraph 9.176 states that a Piling Method Statement will be provided and agreed prior to the commencement of piling. Vibration limits will be set in accordance with BS5228-2 to minimise the risk of complaints or building damage. These limits will be controlled through implementation of the CEMP and vibration monitoring.		GBC to note in terms of planning conditions.	No response required.
Mitigation, Monitoring and Residual Effects – Demolition and Construction Mitigation	Paragraph 9.171 outlines Demolition and Construction traffic noise mitigation to be implemented through a Construction Logistics Plan (CLP).		GBC to note in terms of planning conditions.	No response required.
Table 9.28	Table 9.28 identifies Building Services Noise Limits that would need to be achieved.		GBC to note in relation to drafting planning conditions.	No response required.
Table 9.36, Table 9.37 and Table 9.38	Table 9.36, Table 9.37 and Table 9.38 outline required Sound		GBC to note in relation to drafting planning conditions / future RMAs.	No response required.



	Insulation and Glazing and Ventilation mitigation.			
Chapter 10: Daylight, Sunlight, Overshadowing, Solar Glare and Light Intrusion				
Daylight, Sunlight, Overshadowing, Solar Glare and light Intrusion Assessment Methodologies	The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Assessment Methodology – Proposed Development	Figure 10.2 depicts the 3D model of the maximum extents of the parameter envelope. Under our review of Chapter 4 we noted that there are limits of deviation with regards to building edge which vary from +/- 0.5m to +/- 5m. It is not clear whether the 3D model shown in Figure 10.2 includes for the maximum limit of deviation.		Please confirm what this assessment has actually assessed in relation to the maximum built form parameters.	ES Volume 1, Chapter 2: EIA Methodology, paragraphs 2.34 – 2.47 sets out what has been assessed in terms of maximum and minimum parameters. The massing related technical studies of the EIA (wind microclimate; daylight, sunlight, overshadowing, solar glare and light pollution; and townscape and visual impact) undertook their assessment based on the maximum parameters 3D model which comprised the maximum massing associated with the maximum limits of deviation.
Potential Effects - Completed Development	Table 10.6 highlights in blue those buildings which would meet BRE's criteria for both VSC and NSL. However we query whether or not Galley Hill Road 12-13 should be highlighted in blue as this building is discussed in further detail in Paragraphs 10.100 and 10.101. Similarly, Taunton Road 12-13 is not highlighted in blue, but is not discussed further.		Please confirm whether Table 10.6 is correct and provide a corrected table if required.	Table 10.6 in ES Volume 1, Chapter 10: Daylight, Sunlight, Overshadowing and Solar Glare is correct. For completeness, the properties which you have outlined (Galley Hill Road and Taunton Road) have been discussed further below. A discrepancy was also found with regards to Phoenix Court, which is detailed below. <u>Galley Hill Road 12-13</u> This property should be highlighted blue in Table 10.6 as it has been correctly reported that no VSC or NSL alterations beyond BRE's criteria would occur. The discussion at paragraph 10.100 reports on a marginally worse scenario concluding a “negligible to minor effect”, when the results correctly show that the property would be BRE compliant for daylight and therefore negligible.



				Therefore Table 10.6 is correct, and the discussion reports on a worst-case scenario. The 6th column of this property should read as total “0”, rather than “2”. <u>Taunton Road 12-13</u> This property should not be highlighted blue in Table 10.6 as it is correctly reported that all VSC are BRE’s compliant, and one room would see a minor adverse NSL transgression. As it was not possible to obtain the layouts for this property, they were therefore assumed. BRE suggests that NSL assessment is not applicable where layouts are not known. Based on the assumed layouts, the indicative NSL results in Annex 4 show that this room would retain 77% NSL which is only marginally below the 80% recommended in BRE. Therefore, as the VSC assessment, which is correct and robust, is BRE compliant, the overall conclusion of a negligible to effect to this property remains valid. <u>Phoenix Court 12-32-46-59-73-86-99-103</u> One other typographical error has been identified in Table 10.6 for Phoenix Court. The total in the 6th column should read as “0”, rather than “2”, as all 199 windows identified meet the BRE criteria. Given the alterations to Column 6 of Table 10.6 with regards to Galley Hill Road 12-13 and Phoenix Court 12-32-46-59-73-86-99-103, the sum total should be “52” VSC reductions below BRE guidance and not “56”. No other errors have been identified.
Completed Development Mitigation	The mitigation proposed in Paragraphs 10.211 – 10.212 for Solar Glare and Light Intrusion is in fact Embedded Mitigation as it is included in the Design Code.		GBC to note in terms of securing this mitigation.	No response required.



Chapter 11: Wind Microclimate				
Wind Microclimate Assessment Methodologies	The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Impact Assessment Methodology – CFD Testing	Paragraph 11.17 states that the Proposed Development was modelled using the maximum parameters sought for approval. Under our review of Chapter 4 we noted that there are limits of deviation with regards to building edge which vary from +/- 0.5m to +/- 5m. It is not clear whether the 3D model used for the CFD testing includes for the maximum limit of deviation.		Please confirm what this assessment has actually assessed in relation to the maximum built form parameters.	ES Volume 1, Chapter 2: EIA Methodology, paragraphs 2.34 – 2.47 sets out what has been assessed in terms of maximum and minimum parameters. The massing related technical studies of the EIA (wind microclimate; daylight, sunlight, overshadowing, solar glare and light pollution; and townscape and visual impact) undertook their assessment based on the maximum parameters 3D model which comprised the maximum massing associated with the maximum limits of deviation.
Completed Development Mitigation	This section of the Chapter states that the Design Code includes a number of mandatory controls with regards to building entrances, roof terraces, bus stops and balconies. However upon review of the Design Code we cannot identify where these mandatory controls are detailed. We therefore query how this mitigation will be secured and if it can be relied upon in the subsequent assessments. These mandatory controls are referred to as mitigation in the assessment of Configuration 4 (e.g. paras 11.145, 11.146, 11.149, 11.152, 11.155).		Please confirm where this embedded mitigation has been included in the Design Code. If it is not in the Design Code, can it therefore be relied upon as mitigation? How would these mandatory controls be secured?	Throughout the Design Code, the wind mitigation measures have been detailed with regard to amenity spaces, building entrances, residents amenity terraces, balconies, bus stops and off-site locations to ensure suitable wind conditions. These can be found at Part D: Detailing the Buildings: Sections 12.0 Residential – Key Design Objective, 12.5 Residential – Building Elements and Detailing and Section 13.0 – Hospitality of the Design Code and is considered adequate. It should be noted that the relevant mitigation is clearly set out within ES Volume 1, Chapter 11: Wind Microclimate and ES Chapter 18: Environmental Management, Mitigation and Monitoring Schedule, whereby it is stated that the LPA will need to secure these measures for the project, either using planning conditions on the Decision Notice, or through planning obligations secured by appropriate legal agreement(s). Please note that a Design Code Addendum has been prepared in response to the Avison Young 'Northfleet



				Harbourside Masterplan Review' document dated May 2023. To enable the document to be more user-friendly, the wind mitigation has been clearly set out in Part D: Detailing the Buildings, section 15.3: Wind Microclimate Mitigation. Furthermore, the ES states that further testing will be undertaken at Reserved Matters Stage to ensure wind conditions are suitable across the site. Additional wind testing at this stage will ensure any if and further mitigation and required, these measures are captured and incorporated into the Proposed Development.
Completed Development Mitigation	Paragraphs 11.127 identifies further mitigation measures to be tested and incorporated at the RMA stage.		GBC to note for the RMA stage.	No response required.

Chapter 12: Climate Change and Greenhouse Gas Assessment

Climate Change Mitigation and Greenhouse Gas Assessment methodologies.	The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Demolition and Construction Mitigation	The assessment assumes that there would be a Waste Management Plan implemented. This measure should be secured by way of a suitably worded planning condition as part of any planning permission.		GBC to note requirement for planning condition	No response required.
Demolition and Construction Mitigation	The assessment assumes that there would be a construction phase staff Travel Plan prepared and implemented. This measure should be secured by way of a suitably worded planning condition as part of any planning permission.		GBC to note requirement for planning condition	No response required.



Demolition and Construction Mitigation	The assessment assumes that there would be a Construction Logistics Plan (CLP) prepared and implemented. This measure should be secured by way of a suitably worded planning condition as part of any planning permission.		GBC to note requirement for planning condition	No response required.
Chapter 13: Archaeology				
Archaeology Assessment methodologies.	The assessment methodologies are considered appropriate and in accordance with the Scoping Opinion. The correct scenarios appear to have been assessed.		N/A. GBC to note.	No response required.
Mitigation and Monitoring - Demolition and Construction	Paragraph 13.110 states that mitigation will take place as part of a staged approach and at each stage a Written Scheme of Investigation (WSI) will be prepared to outline the scope and methodology of the work which will be agreed with KCC prior to the works taking place. To achieve preservation by record, the first stages of assessment will comprise archaeological trial trench evaluation and test pit evaluation. The staged approach to the archaeological investigations would be secured through a condition of planning.		GBC to note requirement for planning condition	No response required.
Chapter 14: Ecology				
Consultation and Scope of the Assessment	The Scoping Opinion appended to the ES at Appendix: EIA Methodology, Annex 2 states the following:		Provide evidence that a Habitat Regulations Appropriate Assessment isn't required in relation to the Thames Estuary & Marshes Ramsar and SPA	At the time of writing the ES Chapter, it was considered that the Proposed Development was outside the 6km Zone of Influence (Zol) for the Thames Estuary and Marshes SPA and Ramsar site. It has since been



	“The LPA would agree that the development would fall within parameters of Schedule 2 development and that EIA is required in this instance. It should also be noted that because of proximity to Ramsar/SPA areas east of Gravesend there is potential here for residential development to result in increased visitor numbers and hence bird disturbance to take place on the North Kent Marshes. As a result, in determining any application, the LPA would have to undertake an Appropriate Assessment under the Habitat Regulations. The applicant will also need to take this into account in preparing the submission and should discuss detailed requirements with the LPA and Natural England.” The table at the start of Chapter 14: Ecology and Biodiversity in response to the above states that “These sites were located over 5km from the site so were scoped out of this assessment”. In addition, the Scoping Opinion states the following “KCC Biodiversity Officer has commented that the submitted information has detailed that a preliminary ecological report has been carried out on site and as a result the following is proposed to be carried out:		identified that some of the Proposed Development plots are located within this Zol. Given the site is located within the 6km identified by the Bird Wise North Kent Mitigation Strategy¹ for The Thames Estuary and Marshes SPA and Ramsar (which includes the North Kent Marshes), a Shadow Habitats Regulations Assessment (HRA) has been undertaken (refer to Appendix B). The Zol has been calculated following research on bird disturbance on the North Kent Special Protection areas. It was found that 75% of coastal visitors travel 6 km or less for their visit. It should be noted that as the Competent Authority, Gravesham Borough Council (the Local Planning Authority (LPA)) must determine whether the Proposed Development will have a significant effect on a European Site (whether alone or in combination with other Plans or Projects), in view of that Site’s conservation objectives. This requirement is set down in Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the ‘Habitats Regulations’). The Shadow HRA is intended to provide the information necessary for Gravesham Borough Council to make their assessment of the Proposed Development as the Competent Authority. It should be noted that the responsibility of undertaking an Appropriate Assessment (AA), if required, lies with Gravesham Borough Council – the Competent Authority – who is responsible for granting consent for the scheme. However, it is the Applicant’s obligation to provide information to the Competent Authority to enable them to undertake the assessment. Furthermore, it should be noted that the EIA and HRA are separate and distinct processes, which are governed by their own sets of Regulations. The EIA has assessed the
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¹ Bird Wise (2018) Bird Wise North Kent Mitigation Strategy.



	Assessment of impacts to the SSSI, SPA, Ramsar and NNR within 10km of the site. The table at the start of ES Chapter 14: Ecology and Biodiversity in response to the above states that “this ES chapter covers the above points with the exception of the 10km buffer zone for designated sites which was reduced to 5km. Only one internationally designated site is within 10km.” There is no justification for the choice of 5km and why sites located over 5km from the site can be scoped out. There is no discussion on (or evidence provided in relation to) whether a Habitat Regulations Appropriate Assessment is or isn’t required in relation to the Thames Estuary & Marshes Ramsar and SPA.		potential effects of the Proposed Development on European sites as relevant and considers the impacts on biodiversity (including flora and fauna) which has also informed the shadow HRA. However, it is important to note the distinction between the two processes. In accordance with the EIA Regulations, the ES reports on the likely significant effects arising as a result of the Proposed Development and does not preclude the decision-making authority from granting planning permission. However, likely significant effects identified as part of an HRA may do so. The shadow HRA has been prepared in accordance with the requirements of the Conservation of Habitats and Species Regulations 2017 to determine whether the Proposed Development will result in likely significant effects on the conservation objectives of relevant European designated sites, and whether suitable mitigation measures can be implemented to reduce any potential impacts. As such, the provision of the Shadow HRA at this stage is not considered to constitute ‘<i>additional information</i>’ as per the EIA Regulations. The screening exercise within the Shadow HRA concludes likely significant effects could occur through recreational pressure and disturbance before mitigation. Therefore, an Appropriate Assessment has been undertaken to address this. The conclusions of the Shadow HRA note that with the appropriate mitigation in place, in the form of a financial contribution, the residual effects will be not significant. The Shadow HRA is appended to this document (see Appendix B). With regards to the assessment of impacts to the SSSI, SPA, Ramsar and NNR within 10km of the Proposed Development site, this has been addressed through the ES Chapter (ES Volume 1, Chapter 14: Ecology and Biodiversity) and within the attached Shadow HRA. Within 10km, it is only the Swanscombe Peninsula SSSI and
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				Thames Estuary and Kent Marshes SPA and Ramsar which need to be assessed.
Assessment Methodology – Bird Surveys, and Mitigation, Monitoring and Residual Effects – Demolition and Construction	The Scoping Opinion requires that winter bird surveys are undertaken. It is noted in Paragraph 14.22 that winter bird surveys will be undertaken in the winter of 2022/2023. It is further noted that paragraph 14.130 states that these winter bird surveys will determine the use of the mudflats by overwintering birds and will inform the mitigation needed during winter. Visual and noise barriers will be required in winter along the mudflats if determined by the 2022-2023 winter bird surveys. If there is likely to be a significant effect this will need to be assessed before determination (as per Hardy v Cornwall CC). The survey should be submitted as part of the ES and an assessment of the effect on birds reported.		Please confirm if the winter bird surveys were completed during the winter of 2022/2023. If so, do the survey results require any changes to the submitted ES Chapter and is the stated mitigation required?	Winter Bird surveys were undertaken in December 2022 and January 2023. The Wintering Bird Report has been submitted to the Council and is appended to this response document (Appendix C). The Wintering Bird Report notes that no Annex 1 species that use the Thames Estuary and Marshes SPA in internationally important populations were found to be using the mudflats or Robin's Creek. The Wintering Bird Report confirms the effects established in ES Volume 1, chapter 14: Ecology and Biodiversity. No new or additional significant effects are reported as a result of the findings of the Wintering Bird Report. No new or additional mitigation measures are required. The mitigation outlined in ES Volume 1, Chapter 14: Ecology and Biodiversity remains valid.
Assessment Methodology – Bird Surveys, and Mitigation, Monitoring and Residual Effects – Demolition and Construction	The Scoping Opinion requires that black redstart surveys are undertaken however the chapter notes that access to the relevant part of the Site was not possible and so presence has been assumed. It is noted in Paragraph 14.22 that further black redstart surveys will be undertaken to confirm nesting presence/absence on site during the breeding season (May to August inclusive) (once access is available and prior to construction).		GBC to note requirement for planning condition.	No response required.



	Paragraph 14.129 requires pre-construction black redstart surveys to be undertaken to determine appropriate levels of mitigation. These surveys should be undertaken in the key breeding season (March to August Inclusive) to confirm if black redstarts are nesting directly on the site or not. These surveys should be secured by way of a suitably worded planning condition as part of any planning permission.			
Assessment Methodology – Zone of Influence (Zol)	Paragraph 14.32 states that it has been assessed that the Zol arising from these works is 5km for International statutory sites (5km). As noted above, the Scoping Opinion requested an assessment of impacts to the SSSI, SPA, Ramsar and NNR within 10km of the site. No justification is provided as to why the Zol has been set at 5km.		Please provide justification for why the 5km Zol is appropriate, and whether this was agreed with the KCC Biodiversity Officer.	A Shadow HRA has been undertaken by Schofield Lothian and is appended to this response document (Appendix B). As noted above and within the Shadow HRA, the Proposed Development is located within 6km of the Thames Estuary and Marshes SPA and Ramsar Site. The 6km Zol has been identified by the Bird Wise North Kent Mitigation Strategy to represent the distance over which impacts to the SPA are likely without mitigation. The Shadow HRA concludes that the increase in population is likely to cause an increase in recreational pressure on the SPA. As plots 10, 11, 12 and 13 of the Proposed Development are within 6km of the SPA and Ramsar, a financial contribution for the dwellings within these plots will be required.
Embedded Mitigation Completed Development	Paragraph 14.79 assumes the implementation of a Biodiversity Enhancement and Management Plan (BEMP) which will set out appropriate timings for all proposed habitat management activities. In addition, the BEMP would outline the location and types of wildlife boxes to be installed, to ensure key features are		GBC to note requirement for planning condition	No response required.



	created in appropriate locations. This measure should be secured by way of a suitably worded planning condition as part of any planning permission			
Mitigation, Monitoring and Residual Effects – Demolition and Construction	This section of the Chapter states that ecological management and pollution control measures should be incorporated into the CEMP. In addition an Invasive Species Management Plan should be included in the CEMP. These measures should be secured by way of a suitably worded planning condition as part of any planning permission.		GBC to note requirement for planning condition.	No response required.
Mitigation, Monitoring and Residual Effects – Completed Development	Paragraph 14.141 recommends that a Landscape and Ecological Management Plan (LEMP) be implemented to mitigate any pollution and habitat degradation effects from the completed Proposed Development. The LEMP will provide site specific details for immediate and long-term commitments to manage the planting, protection and enhancement of biodiversity in and around the site. The LEMP should be secured by way of a suitably worded planning condition as part of any planning permission.		GBC to note requirement for planning condition.	No response required.
Chapter 15: Water Resources, Flood Risk, Drainage and Ground Conditions				
Impact Assessment Methodology	Chapter 2 of the ES states that the following assessment scenarios are considered within the technical ES chapters where relevant:		Please provide justification for why the assessment of a single demolition and construction phase is considered appropriate for this topic.	Works are planned to be carried out in two continuous phases. During demolition and construction of the Proposed Development there will be times where individual phases of the Proposed Development have



	Baseline Conditions (2022) Demolition and Construction - Assessment Scenario 1 (2026) Demolition and Construction - Assessment Scenario 2 (2029) Fully Complete and Operational (2031). Chapter 15 appears to have considered a single demolition and construction phase however no explanation or justification for this is given. Given the introduction of sensitive receptors in Phase 1 whilst Phase 2 is under construction it is questioned whether future introduced sensitive receptors in the demolition and construction have been adequately assessed.			been completed and are in occupation at the same time other adjacent phases are under construction. The potential contamination impacts associated with each phased area will be the same as the construction impacts considered within the ES. Each phase will be considered as its own site and the mitigation measures proposed for the demolition and construction works effects above will be undertaken for each construction phase to ensure that there are no adverse impacts on the adjacent operational phase(s). This will be detailed in a detailed CEMP, whilst will include the impact of phasing and will be provided to the council prior to any construction works are undertaken. There will be co-ordination between different development areas and plots and communication between each phase and plot area will be undertaken to ensure that all contaminant pathways are considered and appropriate measures are in place to avoid adverse impacts on receptors. It's important to note that mitigation measures in the form of comprehensive intrusive investigation, followed by appropriate remediation and verification report is proposed to be undertaken prior to any construction works being undertaken. Therefore, during construction the impact of any existing contamination on the site affecting the receptors on and off site will be negligible and therefore will not have an impact on each construction phase. This is also the case for UXO survey and ground gas. Mitigation measures will ensure that the site will be safe and that remediation has been undertaken should any ground gas or UXO be found during intrusive investigation prior to construction, and there will be negligible impact on additional construction phases.
Impact Assessment Methodology -	Paragraph 15.11 states that based on the mitigation measures that have been proposed and the design measures included within the		GBC to note in terms of planning conditions.	No response required.



Flood Risk and Drainage	Proposed Development, it is considered that there will be a Negligible effect (Not Significant) on flood risk and drainage as a result of the Proposed Development. These topics are therefore not considered further within Chapter 15. A number of these mitigation measures are 'embedded' in the outline application through inclusion in the parameter plans and Design Code, however other mitigation will need to be secured by appropriately worded planning conditions (e.g. culvert survey).			
Receptors and Receptor Sensitivity	Table 15.5 'Introduced Site Receptors and Sensitivity' does not include proposed allotments as an introduced sensitive receptor.		Please advise why allotments have been omitted from the assessment. Please confirm the predicted effects to this receptor.	Allotments have been classified under 'Proposed Planting' in Table 15.5 of ES Volume 1, Chapter 15: Water Resources, Flood Risk, Drainage and Ground Conditions, which are noted as high sensitivity. Given the sensitivity of this receptor, and as noted in paragraph 15.197, there is the potential for a moderate to major adverse effect on future site users coming into contact with contaminated soils and groundwater. Intrusive Investigation results will be assessed to ensure areas of exposed soil are suitable for end users.
Mitigation, Monitoring and Residual Effects – Demolition and Construction Mitigation	Paragraph 15.155 states that mitigation measures will be implemented through the CEMP.		GBC to note in terms of planning conditions.	No response required.
Mitigation, Monitoring and Residual Effects	Paragraph 15.159 states that in order to verify contamination conditions on site, a comprehensive intrusive investigation will be undertaken on site. A strategy for dealing with any		GBC to note in terms of planning conditions.	No response required.



	contamination identified and information will be prepared and agreed with GBC. An appropriate foundation works risk assessment including a piling method statement will be prepared to inform the foundation design. This will be secured by a suitably worded planning condition attached to any planning consent.			
Mitigation, Monitoring and Residual Effects	Paragraph 15.167 confirms that a UXO survey will be undertaken prior to any excavation works to define the level or risk and recommend appropriate mitigation measures. This will be secured by a suitably worded planning condition attached to any planning consent.		GBC to note in terms of planning conditions.	No response required.
Chapter 16: Effect Interactions				
General	To be updated based on any comments on Volume 1: Main ES and Volume 2: Townscape and Visual Impact Assessment.		Chapter 16: Effects Interactions will need updating if any of the comments in relation to Volume 1: Main ES and Volume 2: Townscape and Visual Impact Assessment affect significance of residual effects and / or affect the receptors considered	No update is required to this ES Chapter as a result of the comments received in relation to ES Volume 1: Main ES and ES Volume 2: Townscape and Visual Impact Assessment. The conclusions of the assessment remain valid.
Chapter 17: Likely Significant Effects				
General	To be updated based on any comments on Volume 1: Chapters 6 – 15 and Volume 2: Townscape and Visual Impact Assessment.			No new or additional significant effects have been noted as a result of the comments received. An additional scenario has been included within the TVIA response, which notes a phased assessment. However, it is not anticipated that the effects generated by Scenarios 1 and 2 (of the demolition and construction phases) would differ.



				The identification of a Minor to Moderate Adverse effect is reflective of the greater magnitude of impact identified due to the length of the construction period.
Chapter 18: Environmental Management, Mitigation and Monitoring				
General	To be updated based on any changes as a result of comments on Volume 1: Main ES and Volume 2: Townscape and Visual Impact Assessment.		Chapter 18: Environmental Management, Mitigation and Monitoring will need updating if any of the comments in relation to Volume 1: Main ES and Volume 2: Townscape and Visual Impact Assessment affect required environmental management, mitigation. And monitoring.	With regards to environmental management, mitigation and monitoring, one additional mitigation measure has been noted in relation to Ecology. As noted in the Shadow HRA (Appendix B), a Strategic Access Management and Monitoring Scheme (SAMM) payment will be required in relation to the Thames Estuary and Marshes SPA and Ramsar site. This payment is currently £314.05 per dwelling and will be implemented for all dwellings within Plots 10, 11, 12 and 13 of the Proposed Development. The total cost of the payment will be confirmed at the Reserved Matters Stage.
Management Plans	Table 18.1 sets out the various management plans that are proposed as mitigation throughout the ES. No reference is made to the mitigation relied upon in the TVIA, for example the CEMP is included as mitigation for the demolition and construction phase of the TVIA. It is important to ensure that it is clear what environmental assessments require control measures to be implemented in the CEMP so that GBC can ensure all appropriate measures are included in the final CEMP.		No action required by GBC to note that the TVIA also includes control measures that will need to be incorporated in the CEMP.	No response required.
General	Tables 18.1 to 18.3 identify environmental management, mitigation and monitoring.		GBC to note in relation to drafting relevant planning conditions / S106 / consents and GBC to note for the RMA stage.	No response required.



Table 3: Independent Review of Volume 2: Townscape and Visual Impact Assessment

Section Paragraph number within the ES	Independent Review Comment(s) / Observation(s)	Red / Amber / Green (RAG) Rating	Additional Information / Clarification Request	Applicant Response
Assessment Methodology Proposed Development	Under our review of Chapter 4 we noted that there are limits of deviation with regards to building edge which vary from +/- 0.5m to +/- 5m. It is not clear whether the 3D model used in the TVIA includes for the maximum limit of deviation.		Please confirm what this assessment has actually assessed in relation to the maximum built form parameters.	The assessment is based on visualisations using data provided by the design team. The verified views submitted for the planning application were prepared by EB7 according to industry best practice standards. The 3D model used in the TVIA corresponds with the maximum building envelope – i.e., according to the maximum building heights and maximum horizontal extents, inclusive of maximum horizontal deviation – with due consideration of the controls placed upon the parameters set by the Design Code. The massing tested generally represents the maximum deviation (+5m) whereby the maximum building envelope has been modelled. Where there are some exceptions, the modelled massing sits within the -5m deviation zone where the building envelope must accord with the minimum separation distances (i.e., 22m) as set out by the Design Code. Therefore, again, the maximum building envelope sought for approval (as defined by the Parameter Plans and Design Code) has been modelled and assessed.
Methodology	Chapter 2 of the ES states that the following assessment scenarios are considered within the technical ES chapters where relevant: Baseline Conditions (2022) Demolition and Construction - Assessment Scenario 1 (2026)		Please provide justification for why the assessment of a single demolition and construction phase is considered appropriate for this topic.	For the TVIA, a single demolition and construction assessment scenario (assuming the whole site (Phase 1 and Phase 2) is under construction simultaneously) is considered more appropriate and robust for this technical topic given that this would represent a reasonable worst-case scenario for the relevant townscape and visual receptors. The TVIA highlights the long construction period, whereby the demolition and construction assessment scenario



	Demolition and Construction - Assessment Scenario 2 (2029) Fully Complete and Operational (2031). The TVIA appears to have considered a single demolition and construction phase however no explanation or justification for why this is appropriate for this topic is given.			covers the entire clearance, demolition and construction period of the Proposed Development, generating various impacts on both existing and emerging receptors, including tall equipment, noise, construction traffic movement and temporary buildings. The effects are identified as ranging from None/Negligible Neutral to Minor to Moderate Adverse for the entire period. If considered separately, it is not anticipated that the effects generated by Demolition and Construction Assessment Scenarios 1 and 2 would differ, whereby the magnitude of impact established for the demolition and construction phase assessment is reflective of the greater magnitude of impact resulting from the length of the construction period as relevant.
Methodology	Paragraph 2.18 states that a site visit was undertaken in March 2022 but there is no detail provided with regards to when the viewpoint photography was taken. It is noted that vegetation appears to be in full leaf in many of the photographs, and the vegetation is noted in the assessment as providing screening of views of the proposed development on several occasions (e.g. viewpoints 3, 9, 10 and 12). No justification has been provided as to why this photography is considered robust, and no narrative is provided which considers the 'worst case' impacts when the trees are not in leaf. It is therefore questioned why a winter visual survey was not undertaken and whether or not the assessment can be considered robust as the proposed development has not been assessed against the worst case baseline.		Please clarify why these viewpoints have not been prepared using winter views. Please also confirm whether the assessment of these viewpoints would change based on the worst-case winter scenario.	The viewpoint photography was taken on 03 August 2022. The photography shows the trees in full leaf, although the qualitative assessment has given due consideration to the winter condition (i.e., a worst case baseline). During the winter season when the trees are without leaf, the Proposed Development would be filtered by the tree canopy within each of the views. The topography of the landscape, density of existing vegetation and interposing structures contribute to the screening effect and filter visibility of the lower parts Proposed Development. The assessment acknowledges this and hence, as opposed to establishing a Nil magnitude of impact, a magnitude of impact ranging between Nil and Medium is identified in recognition of variable baseline. This approach is considered robust for the purposes of assessment.



Methodology: Cumulative Effects	Paragraphs 2.57 – 2.60 introduces two approaches to cumulative effects and states that the assessment takes the first approach <i>“the additional effects of the main project under consideration... on top of the cumulative baseline”</i>. However, Paragraph 2.135 of ES Chapter 2 EIA Methodology clearly states that cumulative effects arising from the Proposed Development in combination with development schemes (‘cumulative schemes’) has been considered throughout the ES. Paragraph 2.134 quotes the EIA Regulations that consideration should also be given to the likely significant effects arising from the <i>“cumulation with other existing and / or approved projects”</i>. Therefore, the methodology described in ES Volume 2, Townscape and Visual Impact Assessment is inconsistent with the overall ES methodology and inconsistent with the requirements of the EIA Regulations. In addition, paragraph 2.52 lists the scenarios that the AVRs have been provided for and does not list the “cumulative baseline” as a scenario. This raises a question over the actual methodology applied when considering the AVRs.		Please provide a cumulative effects assessment following the correct approach i.e. the second approach identified in paragraph 2.58, the <u>combined</u> effects of the Proposed Development <u>and</u> the cumulative schemes.	Paragraph 2.52 lists “Cumulative” as a scenario to assess; as described under 2.57 “Cumulative” covers both approaches, focusing primarily on the additional effects of the main project under consideration on top of the cumulative baseline or on the combined effects of all the past, present and future proposals together with the new project. As such, this approach is not considered to be inconsistent with the overall ES methodology, and it is considered that the approach robustly considers the potential for cumulative effects as part of the cumulative assessment. The assessment methodology is set out within Section 2.0 of the TVIA and notes that the cumulative assessment is in accordance with the GLVIA guidance. The AVR Methodology is detailed within Section 2.0, and notes that each AVR has been prepared in accordance with Best Practice Guidance, including 06/19 Visual Representation of the Development Proposals Technical Guidance Note. Volume 2 of the ES has assessed the additive effect of the Proposed Development on top of the cumulative condition. We understand the reviewer has asked for a combined assessment of the Proposed Development and the Cumulative Condition. Whilst it is recognised that there are several cumulative schemes in the surrounding area, their relative scale and intensity are limited. With the exception of cumulative schemes 1 and 3, all of the cumulative schemes are located at a considerable distance from the site. Accordingly, the scale and comprehensive nature of the Proposed Development would give rise to significant effects and the combined impact of cumulative schemes would not materially change these findings. The cumulative assessment is therefore considered to be in line with both GLVIA Guidance and the EIA Regulations. The combined effects of the Proposed Development and the cumulative schemes (those identified as Tier 1 and Tier 2) do not change the assessment as set out in the
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				TVIA (as shown in Appendix D). In terms of townscape and visual impact, the combined effects remain beneficial, varying from Minor to Moderate.
Assessment: Townscape Cumulative	- Cumulative demolition and construction phase effects have not been considered.		As identified above, please provide a cumulative effects assessment following the correct approach, covering demolition and construction effects as well as operation effects.	With the exception of cumulative schemes 1 and 3, all of the cumulative schemes are located at a considerable distance from the site. When considering the Proposed Development in-combination with these relevant cumulative schemes, given factors such as their scale, distance from the site, and relevant shared receptors, the combined demolition and construction phase effects are not considered to have the potential to change the effects established for the Proposed Development in isolation, as set out in the TVIA. For clarity, the residual effects tables from the TVIA with the inclusion of demolition and construction phase townscape cumulative effects (for both Tier 1 and Tier 2 cumulative schemes) is provided as an appendix to this document (Appendix D). As shown, all demolition and construction phase cumulative townscape effects (Tier 1 and Tier 2) are considered to remain the same as the effects established for the Proposed Development in isolation. There are no significant cumulative construction phase effects on townscape, as identified for the Proposed Development in isolation.
Assessment: Visual Cumulative	- Cumulative demolition and construction phase effects have not been considered.		As identified above, please provide a cumulative effects assessment following the correct approach, covering demolition and construction effects as well as operation effects.	With the exception of cumulative schemes 1 and 3, all of the cumulative schemes are located at a considerable distance from the site. When considering the Proposed Development in-combination with these relevant cumulative schemes, given factors such as their scale, distance from the site, and relevant shared receptors, the combined demolition and construction phase effects are not considered to have the potential to change the effects established for the Proposed Development in isolation, as set out in the TVIA.



				For clarity, the residual effects tables from the TVIA with the inclusion of demolition and construction phase visual cumulative effects (for both Tier 1 and Tier 2 cumulative schemes) is provided as an appendix to this document (Appendix D). As shown, all demolition and construction phase cumulative visual effects (Tier 1 and Tier 2) are considered to remain the same as the effects established for the Proposed Development in isolation. There are no significant cumulative construction phase effects on visual receptors, as identified for the Proposed Development in isolation.
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Table 4: Independent Review of the Non-Technical Summary

Section Paragraph number within the ES	Independent Review Comment(s) / Observation(s)	Red / Amber / Green (RAG) Rating	Additional Information / Clarification Request	Applicant Response
General	To be updated based on any comments on Volume 1: Main ES and Volume 2: Townscape, Visual Impact Assessment.			No update to the NTS is required as a result of the comments received. The submitted document remains valid.



Appendix A: Updated Figure 3.1

Figure 3.1: Existing Surroundings Built form (Land Use and Height)





Appendix B: Shadow Habitat Regulation Assessment

Northfleet Central 1 Ltd

Ecological Services

Shadow Habitat Regulations Assessment

Northfleet, Gravesham.



Reference No.: TRI044 (Rev001)

Date: August 2023

Document Management

Project No: TRI044
Title: Shadow Habitat Regulations Assessment Northfleet, Gravesham.
Contracting Authority: Northfleet Central 1 Ltd
Issue Date: August 2023
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Rev001			
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Executive Summary

Designated Sites	Qualifying Features	Pathways of Impact Screened	Impacts requiring Appropriate Assessment
Thames Estuary and Marshes SPA and Ramsar site (5.7 km east of the Proposed Development Site): a wetland of European importance comprising a mosaic of intertidal habitats, saltmarsh, coastal grazing marshes, saline lagoons and chalk pits.	Wintering populations of the Annex 1 species: - Avocet, - Hen harrier, Wintering populations of non-annex 1 species: - Black-tailed godwit, - Dunlin, - Grey plover, - Knot, - Redshank, - Common ringed plover. - Waterbird assemblage (>20,000 birds). - Supports endangered and nationally scarce plants of wetland habitats and 20+ British Red Data Book invertebrates. - Supports the endangered least lettuce (<i>Lactuca saligna</i>), at least 14 nationally scarce plants of wetland habitats, and more than 20 British Red Data Book invertebrates. - Supports internationally important numbers of ringed plover, black-tailed godwit, grey plover, knot, dunlin and redshank.	- Recreational pressure and disturbance, - Reduced air quality, - Reduced water quality, - Air pollution, - Loss of supporting habitat.	Recreational Pressure and Disturbance.

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1 Introduction

1.1 Background Information

- 1.1.1 Assystem was appointed by Northfleet Central 1 Ltd (the client) to carry out ecological assessment for a Proposed Development on land at Northfleet, Kent. Part of this ecological assessment includes a shadow Habitat Regulations Assessment (HRA) in relation to potential adverse effects on European designated sites within the zone of influence of the Proposed Development. The Proposed Development is within the 6 km zone of influence of the Thames Estuary and Marshes SPA and Ramsar only.
- 1.1.2 This Shadow HRA is intended to provide the information necessary for Gravesham Borough Council to make their assessment of the Proposed Development as the Competent Authority. It should be noted that the responsibility of undertaking an Appropriate Assessment (AA), if required, lies with Gravesham Borough Council – the Competent Authority - who is responsible for granting consent for the scheme. However, it is the Applicant's obligation to provide information to the Competent Authority to enable them to undertake the assessment.

1.2 Legislative Context

- 1.2.1 The need for an assessment of impacts on European sites is set out within the Conservation of Habitats and Species Regulations 2017 (as amended)¹. The Regulations apply the precautionary principle to European Sites, in line with the findings of a legal judgement in the European Court of Justice (Waddenzee case C-127/02) and where any uncertainty or doubt over an impact or effect an adverse impact should be assumed.
- 1.2.2 Consent should only be granted for plans and projects once the relevant competent authority has ascertained that there will either be no likelihood of significant effects, or no adverse effect on the integrity of the European Site(s) in question. Where an Appropriate Assessment has been carried out and results in a negative impact, or if uncertainty remains over the significant effect, consent will only be granted if there are no alternative solutions and there are Imperative Reasons of Over-riding Public Interest (IROPI) for the development and compensatory measures have been secured. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the plan or project in question. The competent authority is entitled to request the applicant to produce such information as the competent authority may reasonably require for the purposes of the assessment, or to enable it to determine whether an appropriate assessment is required.
- 1.2.3 Over the years, 'Habitats Regulations Assessment' (HRA) has come into wide currency to describe the overall process set out in the Habitats Regulations, from screening through to identification of IROPI. This has arisen in order to distinguish the overall process from the individual stage of "Appropriate Assessment". Throughout this Report the term HRA is used for the overall process and restricts the use of Appropriate Assessment to the specific stage of that name.
- 1.2.4 It should be noted that as the Competent Authority, the Gravesham Borough Council (the Local Planning Authority (LPA)) must determine whether the Proposed Development will have a significant effect on a European Site (whether alone or in combination with other Plans or Projects), in view of that Site's conservation objectives. This requirement is set down in Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations').

¹ The Conservation of Habitats and Species Regulations 2017 (as amended). His Majesty's Stationary Office (HMSO).

1.3 Site Description

1.3.1 The site is located adjacent to the River Thames in Northfleet, in the borough of Gravesham in Kent. Swanscombe Peninsula Site of Special Scientific Interest (SSSI) is adjacent to the north-west of the site and Thames Estuary and Marshes Special Protection Area (SPA) and Ramsar site, is located 5.7 km to the east of the site.

1.3.2 Due to the scale of the site the was split into three areas referred to as:

- RLB South;
- RLB North-East; and
- RLB North-West.

1.3.3 The extent of this has been illustrated in Figure 1-1.

RLB South

1.3.4 The RLB South area of the site is approximately 6 hectares (ha) and is currently mainly occupied by industrial and commercial activities with Ebbsfleet FC stadium taking up a large amount of the area.

RLB North-East

1.3.5 The RLB North-East area of the site is approximately 6 hectares (ha) and is currently mainly occupied by industrial and commercial activities with a large active sand and gravel works and other industrial buildings such as car and truck mechanic's buildings.

RLB North-West

1.3.6 The RLB North-West area of the site is approximately 6.3 hectares (ha) and is dominated by industrial units, hardstanding mixed with ephemeral vegetation. Also on site are scattered trees, ornamental planting as well as sparse species-poor hedgerow with trees. Directly adjacent north of the site is Swanscombe Peninsula SSSI, which directly includes a dense treeline adjacent to the site boundary.

Figure 1-1: Red-Line Boundary (Maps data: Google 2022)

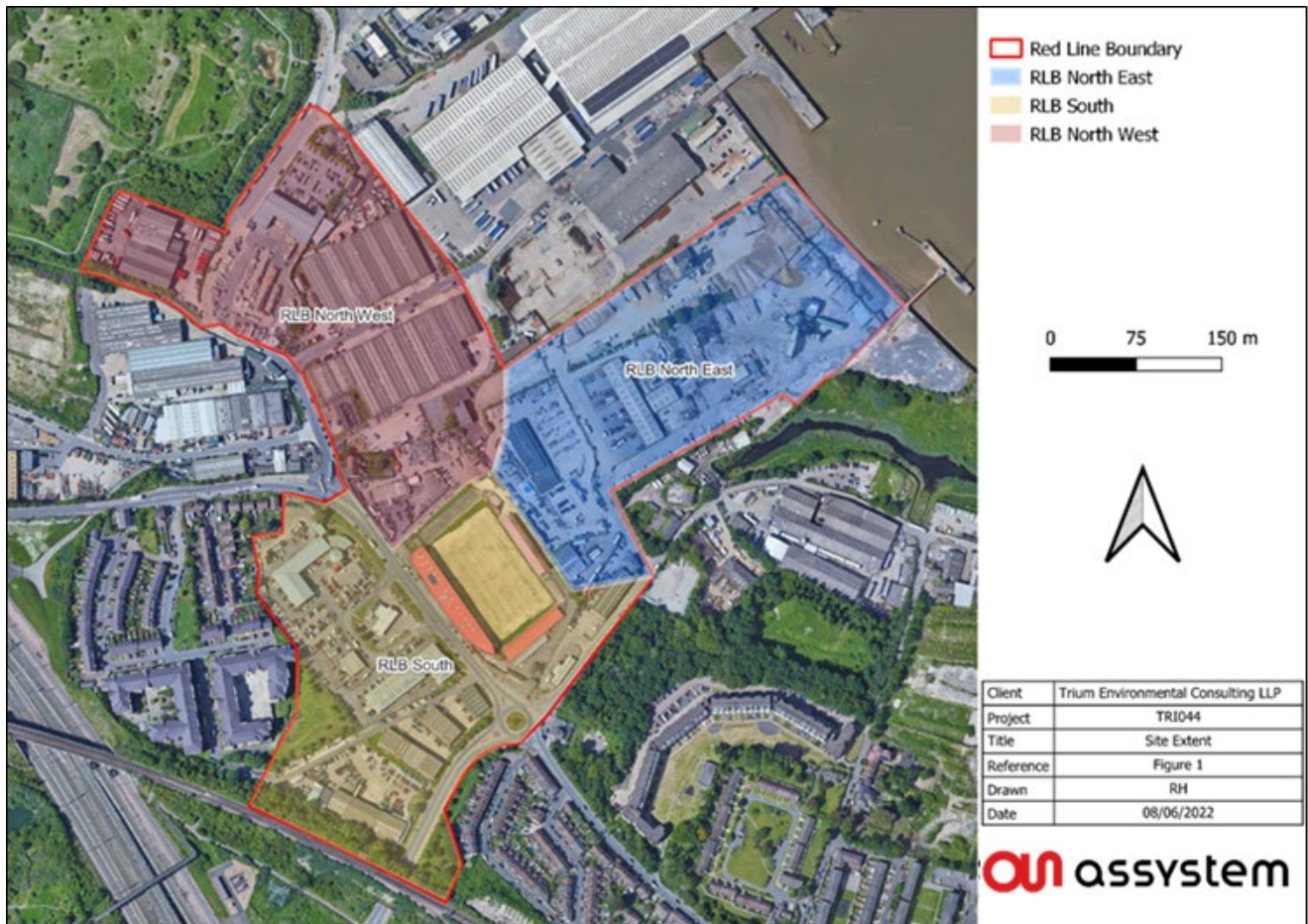
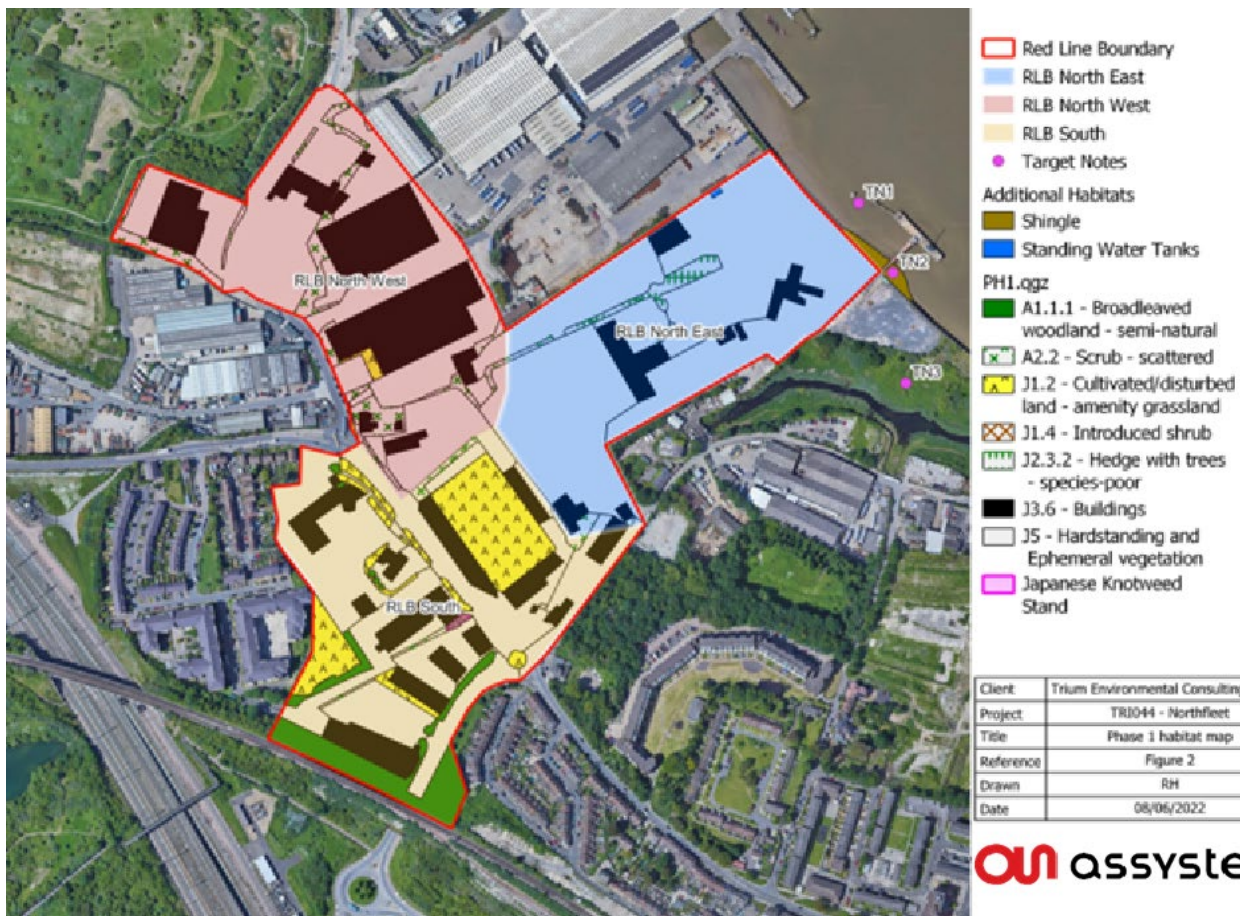


Figure 1-2: Phase 1 Habitat Survey Map (Maps data: Google 2022)



1.4 Proposed Works

- 1.4.1 The Applicant is seeking outline planning consent for a mixed-use development comprising the redevelopment of the EUFC stadium, along with 180,000 sqft of office employment space, a maximum of 3,000 new residential units and extensive public realm and landscaping improvements. Given the Applicant is seeking outline permission, should the application be granted, Reserved Matters Applications will be submitted in due course, which will provide more detail.

1.5 Quality Assurance

- 1.5.1 All lead Assystem ecologists are members of (at the appropriate level) the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct when undertaking ecological work.
- 1.5.2 All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2015, 14001:2015 and 45001:2018.
- 1.5.3 Assystem are a CIEEM Registered Practice, and as such champion high professional standards whilst delivering the best outcomes for biodiversity and supporting a thriving economy.

2 Methodology

2.1 The Habitat Regulations Assessment Process

- 2.1.1 The Conservation of Habitats and Species Regulations 2017 (as amended) transpose the European Union Birds Directive 1979/2009 and Habitats Directive 1992 into UK law. Under these regulations, competent authorities are required to consider whether plans or projects will have a likely significant effect on the integrity of a European protected site, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). In addition to these, national planning policy² places an expectation for additional sites to be considered through the HRA process, comprising those sites under consideration, i.e., potential SPAs (pSPAs) and candidate SACs (cSACs), Ramsar sites and areas identified to provide compensatory sites.
- 2.1.2 The HRA process enables the competent authority to establish if the integrity of protected European sites is likely to be significantly impacted by a proposed plan or project by following a four-stage process as follows:
- **Stage 1: Screening.** Applicable if the proposals qualify as a ‘plan’ or ‘project’ within the scope of the Habitats Directive 1992, where the project or plan is not directly connected with or necessary to the management of the European site, and the plan or project is of a type that could possibly have an effect on a European site;
 - **Stage 2: Appropriate Assessment and the Integrity Test.** Applicable when it is confirmed by Stage 1 Screening that the plan or project is likely to have a significant effect on a European site either on its own or in combination with other plans or projects;
 - **Stage 3: Alternative Solutions.** If likely significant effects are unavoidable, Stage 3 considers if alternative solutions to the proposed plan are available, which would be of lesser impact on the European sites; and
 - **Stage 4: Imperative reasons of overriding public interest and compensatory measures.** If no alternative solutions are available, it must be determined if there are imperative reasons of overriding public interest which would enable the plan or project to proceed on the basis that compensation measures are secured with regard to the likely significant effects.

2.2 Purpose

- 2.2.1 The objective of this report is to provide information for Stage 1 Screening in order to ascertain whether Stage 2 Appropriate Assessment is required in relation to potential impacts of the proposed project on relevant European designated sites, and then to apply Stage 2 Appropriate Assessment if necessary.

² Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework.

2.3 The Assessment Methodology

- 2.3.1 Stage 1 Screening aims to ascertain what factors should ‘trigger’ Stage 2 Appropriate Assessment. In order to determine if the proposed plan or project may have a ‘likely significant effect’ (LSE) on the integrity of each relevant designated site, each qualifying feature (or group of qualifying features, where appropriate) is compared against each potential significant effect from the plan or project. Only those effects which are likely to be significant are then advised for progression through to Stage 2 Appropriate Assessment.
- 2.3.2 Case law provides important direction in defining and determining the meaning of the words ‘likely’ and ‘significant’ in the context of HRA (Boggis v Natural England [2009] EWCA Civ 1061, 20th October 2009, paras 36 & 37; Advocate-General Sharpston’s opinion in Sweetman v An Bord Pleanála [2011] CJEU C-258/11, 11th April 2013, para 48), as well as providing key information that confirms that mitigation measures must not be included in the Stage 1 Screening Assessment (People Over Wind & Sweetman v Coillte [2018] CJEU C-323/17, 12th April 2018).
- 2.3.3 For those effects that are unlikely to be significant with the plan or project considered in isolation, these are then considered as part of a cumulative assessment in relation to other plans or projects which may impose the same or interlinked effects on the same designated sites. If such effects are likely to be considered significant in respect of in-combination impacts, these are then recommended for further consideration at Stage 2 Appropriate Assessment.
- 2.3.4 Where it is considered not possible to ‘screen out’ likely significant effects without detailed appraisal, or where mitigation is required that would not be implemented were it not for the need to protect the designated site, it is necessary to progress to the later ‘Appropriate Assessment’ stage to explore the adverse effects and devise mitigation. This stage may in some instances involve detailed data collection and analysis, and development of mitigation approaches, however, in other cases, where mitigation is already available, it may simply be a case of identifying the need to implement such mitigation. In short, the assessment detail should be ‘appropriate’ to the situation at hand.

3 Screening Assessment

3.1 Project Determination

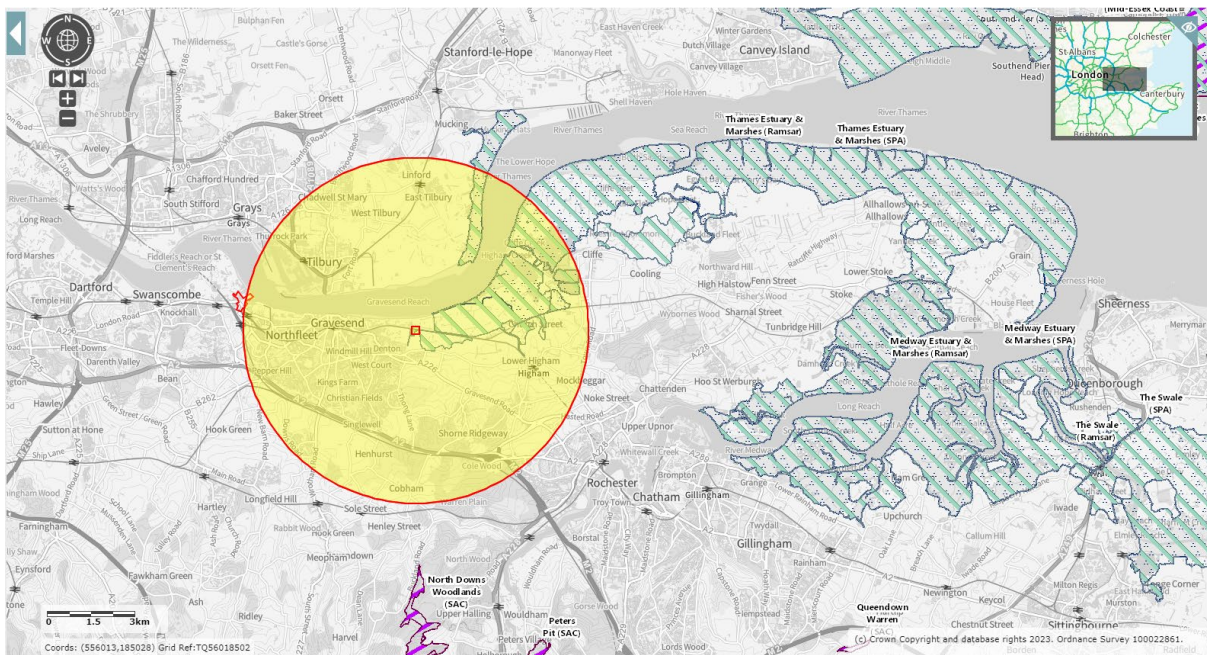
- 3.1.1 As neither the Habitats Directive or the Conservation of Habitats and Species Regulations 2017 (as amended) provide a definition of what constitutes a project, consideration has been given to European Commission guidance³. This identifies that a project should be considered as *‘the execution of construction works or of other installations of schemes – other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources’*.
- 3.1.2 The guidance also identifies that for a project or plan to be *‘directly connected with or necessary to the management of the site’*, the *‘management’* aspect requires measures to be for conservation purposes and the *‘directly’* aspect requires measures to be solely formulated for the conservation management of a site and not the direct or indirect consequence of another activity.
- 3.1.3 As a result, the development of land at Northfleet, Kent is considered to comprise a project and is not directly connected with or necessary to the management of a European Site.

³ European Commission (2000) Managing Natura 2000 Sites. The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC.

3.2 Determination of Sites for Consideration

3.2.1 Adverse effects resulting from development proposals will often extend beyond a project boundary, and as a result the consideration of sites potentially impacted by the development has been extended to include the Zone of Influence⁴ (Zoi) of the Thames Estuary and Marshes SPA and Ramsar site (6 km). As identified in Figure 3-1, consideration is given to Thames Estuary and Marshes SPA and Ramsar site which is c. 5.7 km east of the site.

Figure 3-1: Thames Estuary and Marshes SPA and Ramsar Site Zone of Influence (Maps data: DEFRA, 2023)



- 3.2.2 The Thames Estuary and Marshes is located in the outer Thames Estuary on the south-east coast of England which separates Kent and Essex and is a wetland of European importance comprising a mosaic of intertidal habitats, saltmarsh, coastal grazing marshes, saline lagoons and chalk pits. The majority of the site is located on the south bank of the estuary, which stretches from the western side of Cliffe Pools to Grain Tower. The site also covers a small part of the northern bank of the outer estuary between Coalhouse Point in East Tilbury, to the most western part of the reclaimed land at Mucking Flats (Essex).
- 3.2.3 The site is predominantly characterised by extensive intertidal mudflats that are visible at low tide. There is saltmarsh, complex channel systems, and a series of disused quarry pits have been transformed to create an extensive series of ponds and lakes at Cliffe Pools. The intertidal areas are mostly bound by levees and seawalls, occasionally featuring small beaches. Important habitats lie above the highest tide, such as the grazing marsh and flooded mineral works. Additionally, habitat creation schemes as part of the London Gateway port development are providing new habitat.
- 3.2.4 The SPA has a variety of habitat types, which provide wintering and breeding habitats for internationally important assemblages of waterbirds, as well as supporting migratory birds on passage. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.
- 3.2.5 The site qualifies under article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the GB populations of the Annex I species avocet (*Recurvirostra avosetta*) and hen harrier (*Circus*

⁴ Bird Wise (2018) Bird Wise North Kent Mitigation Strategy.

cyaneus), in any season. The site also qualifies under article 4.2 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations, in any season, of the regularly occurring migratory species listed in Table 3-1.

Table 3-1: Thames Estuary SPA Bird Populations

Common Name	Scientific Name	Breeding/Wintering	Numbers
Annex 1 Species			
Avocet	<i>Recurvirostra avosetta</i>	Wintering	283 individuals (28.3% of GB population)
Hen harrier	<i>Circus cyaneus</i>	Wintering	7 individuals (1% of GB population)
Non-Annex 1 Species			
Common ringed plover	<i>Charadrius hiaticula</i>	Concentration/Passage	1,324 peak mean (2.6% Europe/Northern Africa population)
Grey plover	<i>Pluvialis squatarola</i>	Wintering	2,593 peak mean (1.7% Eastern Atlantic population)
Dunlin	<i>Calidris alpina</i>	Wintering	29,646 peak mean (2.1% North Siberia/Europe/ W Africa population)
Knot	<i>Calidris canutus islandica</i>	Wintering	4,848 peak mean (1.4% NE Can/Grl/Iceland/NW Europe population)
Black-tailed godwit	<i>Limosa limosa islandica</i>	Wintering	1,699 peak mean (2.4% Iceland (breeding) population)
Redshank	<i>Tringa totanus totanus</i>	Wintering	3,251 peak mean (2.2% Eastern Atlantic (wintering) population)

3.2.6 The site also qualifies under article 4.2 of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterfowl in any season.

3.2.7 Other Annex 1 species which regularly occur on the site in non-qualifying numbers are breeding common tern (*Sterna hirundo*), and passage and wintering Bewick's swan (*Cygnus columbianus bewickii*), golden plover (*Pluvialis apricaria*), ruff (*Philomachus pugnax*), short-eared owl (*Asio flammeus*) and kingfisher (*Alcedo atthis*). Although not included in the qualifying features of the site, the site also supports nationally important populations of shelduck (*Tadorna tadorna*), teal (*Anas crecca*), pintail (*Anas acuta*), gadwall (*Anas strepera*), shoveler (*Anas clypeata*), tufted duck (*Aythya fuligula*) and pochard (*Aythya farina*).

3.2.8 The European Site Conservation Objectives⁵ for Thames Estuary and Marshes Special Protection Area are to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features; and,
- The distribution of the qualifying features within the site.

3.2.9 The Gravesham Local Plan Core Strategy⁶ was adopted in 2014 and is the main planning document that sets out the long-term vision, spatial strategy and core policies that are used for shaping future development in the Borough up to March 2028.

⁵ Natural England (2019) European Site Conservation Objectives for Thames Estuary and Marshes Special Protection Area Site Code: UK9012021.

⁶ Gravesham Borough Council (2014) Gravesham Local Plan Core Strategy.

- 3.2.10 The Strategy includes a specific policy SO16 intended to safeguard and enhance the biodiversity of the Borough.
- 3.2.11 The Thames, Medway and Swale Estuaries Strategic Access Management and Monitoring Strategy⁷ sets out a strategy to resolve disturbance issues to wintering birds on the North Kent Marshes, focussing on the European Protected Sites (Thames Estuary and Marshes SPA/Ramsar Site, Medway Estuary and Marshes SPA/Ramsar Site, and The Swale SPA/Ramsar Site) and their internationally important bird interest features. The Strategy has been produced by the North Kent Strategic Access Management and Monitoring Scheme (SAMMS) Board, a partnership of the following organisations: Kent Wildlife Trust, The Kent Developers Group, Natural England, Royal Society for the Protection of Birds (RSPB), Canterbury City Council, Ebbsfleet Development Corporation, Kent County Council, Gravesham Borough Council, Medway Council and Swale Borough Council.
- 3.2.12 The Proposed Development is only within the zone of influence of the Thames Estuary and Marshes SPA/Ramsar Site, therefore the Medway Estuary and Marshes SPA/Ramsar Site, and the Swale SPA/Ramsar Site are not considered within this assessment but are mentioned here as they form the wider SAMMS.

3.3 Impact Pathways Considered

- 3.3.1 There are numerous pathways of impact that may connect a plan or project to potential likely adverse effects on a European protected site. Table 3-2 details current threats and pressures to Blackwater Estuary.

Table 3-2: Summary of Thames Estuary and Marshes Estuary SPA/Ramsar and Features

Designated Site	Proximity	Size of SPA	Qualifying Features ^{8,9}	Conservation Objectives ^{10,11}	Current Pressures/Threats ^{12,9} to the SPA
Thames Estuary and Marshes SPA	5.7 km east	4,838.94 ha	Wintering populations of: - Avocet, - Black-tailed godwit, - Dunlin, - Grey plover, - Hen harrier, - Knot, - Redshank, - Ringed plover. Waterbird assemblage.	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: - The extent and distribution of the habitats of the qualifying features; - The structure and function of the habitats of the qualifying features; - The supporting processes on which the habitats of the qualifying features rely;	1. Coastal squeeze, 2. Public access/Disturbance, 3. Invasive species, 4. Changes in species distributions, 5. Fisheries: Commercial marine and estuarine, 6. Vehicles: illicit, 7. Air Pollution: risk of atmospheric nitrogen deposition.

⁷ Liley, D. & Underhill-Day, J. (2013). Thames, Medway and Swale Estuaries – Strategic Access Management and Monitoring Strategy. Unpublished report by Footprint Ecology.

⁸ JNCC, DEFRA (2015). Natura 2000 Standard Data Form, Site UK9012021 Thames Estuary and Marshes.

⁹ JNCC, DEFRA (2008). Ramsar Information Sheet: UK11069.

¹⁰ Natural England (2019) European Site Conservation Objectives for Thames Estuary and Marshes Special Protection Area Site Code: UK9012021

¹¹ Port of London Authority. Thames Estuary and Marshes Conservation Objectives.

¹² Natural England (2015). Site Improvement Plan Greater Thames Complex.

				-The population of each of the qualifying features; and - The distribution of the qualifying features within the site.	
Thames Estuary and Marshes Ramsar site	5.7 km east	5,588.59 ha	- Criterion 2: site supports the endangered least lettuce (<i>Lactuca saligna</i>) and at least 14 nationally scarce plants of wetland habitats. The site also supports more than 20 British Red Data Book invertebrates. - Criterion 5: supports internationally important assemblages (>20,000 birds) of waterfowl. - Criterion 6: for internationally important numbers of ringed plover, black-tailed godwit, grey plover, knot, dunlin and redshank.	Subject to natural change, maintain in favourable condition the habitats for the internationally important population of the regularly occurring Annex 1 bird species, under the Birds Directive, in particular: • Saltmarsh; • Intertidal Mudflats; and • Intertidal shingle. Subject to natural change, maintain in favourable condition the habitats for the internationally important assemblage of waterfowl, under the Birds Directive, in particular: • Saltmarsh; • Intertidal Mudflats; and • Intertidal shingle.	1. Erosion of intertidal habitat, 2. Dredging, 3. Public access/Disturbance, 4. Eutrophication.

- 3.3.2 Table 3-2 shows details of the Thames Estuary and Marshes SPA/Ramsar, and potential pathways of impact. Threats currently known to be impacting the SPA have been determined via its Natura 2000 form⁷ and are cited as being:
- Invasive non-native species,
 - Outdoor sports and leisure activities, recreational activities,
 - Changes in abiotic conditions,
 - Changes in biotic conditions.
- 3.3.3 Natural England's Site Improvement Plan includes priority issues, identified in Table 3-2, that are being addressed.
- 3.3.4 At the outline planning stage, plots 10, 11, 12 and 13 of the Proposed Development are within the 6 km ZOI for the Thames Estuary and Marshes SPA/Ramsar site. The Proposed Development is adjacent to the River Thames, providing connectivity with the SPA. Potential pathways of impact that require consideration in relation to the Proposed Development of the site are:
- Recreational pressure causing disturbance of birds on the SPA,
 - Atmospheric nitrogen deposition,
 - Reduced water quality,
 - Air pollution,
 - Loss of supporting habitat.

3.4 HRA Screening

Recreational Pressure and Disturbance

- 3.4.1 The Proposed Development will be located c. 5.7 km west of the Thames Estuary and Marshes SPA/Ramsar site which is within the 6 km Zone of Influence identified by the Bird Wise North Kent Mitigation Strategy to represent the distance over which impacts to the SPA is likely without mitigation. Recreational activities can result in significant effects on protected sites because of erosion, trampling and disturbance, plus associated impacts such as fire and vandalism.
- 3.4.2 There is growing concern about the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfil conservation objectives while also providing recreational opportunity.
- 3.4.3 Evidence in the literature suggests that the magnitude of disturbance clearly differs between different types of recreational activities. For example, dog walking leads to a significantly higher reduction in bird diversity and abundance than hiking¹³. Scientific evidence also suggests that key disturbance parameters, such as areas of influence and flush distance, are significantly greater for dog walkers than hikers¹⁴. Data from visitor surveys suggest that important spatial (e.g., the area of a site potentially influenced) and temporal (e.g., how often or long an activity is carried out) parameters differ between recreational activities, suggesting that these are factors that should ideally be considered in ecological assessments. In addition, displacement of birds from one feeding site to others can increase the feeding pressure on available resources, which have to sustain greater numbers of birds¹⁵. Recreation disturbance in winter can be more adverse because birds are more vulnerable at this time of year due to food shortages. Disturbance can also represent a much more direct threat to survival, such as in the case of predation by dogs and cats. Dogs are often exercised off-lead and roam out of sight of their owners and have been documented to kill ground-nesting birds.

¹³ Banks P.B., Bryant J.Y. 2007. Four-legged friend or foe? Dog walking displaces native birds from natural areas. *Biology Letters* 3: 14pp

¹⁴ Miller S.G., Knight R.L., Miller C.K. 2001. Wildlife responses to pedestrians and dogs. 29: 124-132

¹⁵ Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72.

- 3.4.4 The Kent coast habitats are already subject to recreational pressure, however the increase in population resulting from the Proposed Development will likely lead to an increase in visitor numbers to the SPA. Unless adequately managed, this creates a potential for conflict between recreational activities and the conservation of internationally important assemblages of birds and habitats.
- 3.4.5 Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities (e.g., boating, water sports, walking, bait-digging, fishing and wildfowling). The types, levels and locations of potentially disturbing activities are constantly changing.
- 3.4.6 A bird disturbance study¹⁶ was undertaken in 2012 to assess the impacts of recreational activities on the North Kent SPA and Ramsar sites. The key findings are:
- There have been marked declines in the numbers of birds using the SPAs, in particular on the Medway at locations with the highest levels of access.
 - Disturbance is a potential cause of the declines; the busiest locations have seen the most marked bird declines and support particularly low numbers of birds.
 - Access levels are linked to local housing, with much of the access involving frequent use by local residents. It is not possible to rule out any likely significant effects on the integrity of the European sites as a result of increased housing. A suite of mitigation measures is therefore necessary to avoid potential adverse effects caused by future development.
 - The current main cause of disturbance is dog walking, and when dogs are walked off the lead. Other activities that cause disturbance include cycling, jogging and those that involve people on the mudflats or the water.
 - Development within 6 km of access points to the SPAs is particularly likely to lead to increase in recreational use of the SPAs. Local greenspace use such as dog walking, cycling, jogging, walking, and to some extent family outings, will originate from people living within this radius.
 - Beyond 6 km from access points onto the SPA, large developments, such as the Northfleet Proposed Development, or large-scale changes to housing levels will also result in increased recreational use. Visitors to the North Kent coast mostly originate from a zone north of the M2/A2 between Gravesend and Herne. People living within this

¹⁶ Liley, D., Lake, S. & Fearnley, H. (2012). Phase I – Bird Disturbance Report. Footprint Ecology/GGKM/NE.

broad coastal strip (i.e., beyond 6 km from SPA access points and north of the M2/A2) are likely to visit for more coastal specific activities.

- Development beyond 6 km, with the exception of large development schemes, could be screened out of assessments as it is assumed they are unlikely to have a significant effect on the protected sites.
- Mitigation measures such as awareness raising, on-site wardening, provision of signage and access infrastructure, provision/enhancement of green space away from the SPAs and direct contact with users are suggested.
- Areas currently undisturbed, and in particular the main roost sites should, in particular, be protected from additional recreational pressure.

3.4.7 The effects of increased recreational disturbance on a range of species include:

- A reduction in the time spent feeding, due to repeated flushing and increased vigilance.
- Increased energetic costs.
- Avoidance of areas of otherwise suitable habitat, potentially with birds feeding at poorer quality locations.
- Increased stress.
- Depending on the nature, frequency and level of the disturbance, some birds may take flight temporarily, but return after the disturbance ends. Other birds may modify their feeding habits, whilst more sensitive species may suffer reduced breeding success or, ultimately, desert the site.

3.4.8 In summary, birds are expending energy avoiding visitors to the SPA, which is time that is not spent feeding¹⁷. Overall, disturbance is likely to increase energetic output while reducing energetic input, which can adversely affect the 'condition' and ultimately survival of the birds. Birds may be forced in to fewer, larger colonies which increases the rate of predation by mammals such as red fox (*Vulpes vulpes*) who prey upon eggs and chicks.

3.4.9 Where disturbance causes a bird to leave a particular site, the availability of suitable alternative sites is critical for the bird's survival. The site in which it settles may already be populated or may be of lower quality resulting in lower rates of energy intake. This is especially critical in cases of major flight, when a bird flies further than 500 meters, as the energy spent in flight can be catastrophic for the bird⁴.

3.4.10 Recreational disturbance can affect breeding success. Breeding birds are subject to the stress of defending a territory, laying eggs and rearing chicks. Recreational disturbance can result in nest desertion, trampling of eggs and an increase in predation rates¹⁸.

3.4.11 The SPA and Ramsar site are separated from the Proposed Development by Gravesend, however, the Thames provides good connectivity between the site and the designated areas. Whilst there is no evidence that the terrestrial elements of the Proposed Development support significant numbers of roosting or wintering birds, recorded in the desk study (TRIO44 Northfleet Preliminary Ecological Appraisal) are numerous species for which the SPA is designated:

¹⁷ Riddington, R. et al. 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. Bird Study 43:269-279

¹⁸ LILEY, D. and SUTHERLAND, W.J. (2007). Predicting the population consequences of human disturbance for Ringed Plovers *Charadrius hiaticula*: a game theory approach. *Ibis*, 149, pp.82–94. doi:<https://doi.org/10.1111/j.1474-919x.2007.00664.x>.

- 20 records of avocet,
- Two records of hen harriers,
- 60 records of ringed plover,
- 43 records of grey plover,
- 120 records of dunlin,
- Three records of knots,
- 73 records of black-tailed godwit.

3.4.12 The Proposed Development will lead to an increase in population; therefore, it is not possible to screen out the pathway of recreational pressure and disturbance as without mitigation, the Proposed Development will add to a known pressure on the SPA and Ramsar site.

Atmospheric Nitrogen Deposition

- 3.4.13 The Proposed Development has the potential to generate pollutant emissions through construction related combustion, which may indirectly impact upon Thames Estuary and Marshes SPA and Ramsar site. Climate change is predicted to increase winter rainfall, which may cause higher levels of nitrogen deposition.
- 3.4.14 Nitrogen deposition exceeds site-relevant critical loads and hence there is a risk of harmful effects. However, declines in the numbers of breeding birds in the Essex Estuaries appear to be due to loss of habitat and disturbance rather than over-vegetation of breeding areas caused by nitrogen deposition¹⁹, it is likely that the same is true for the Thames Estuary and Marshes SPA.
- 3.4.15 Intertidal habitats are considered to be among the most productive natural ecosystems due to regular flushing with nutrient rich waters. Nitrogen deposition is likely to be of low importance for these systems as the inputs are probably significantly below the large nutrient loadings from river and tidal inputs. The closed upper marsh communities may be more susceptible to nitrogen deposition²⁰.
- 3.4.16 The pollution from the construction phase of the Proposed Development would be temporary and the routing of construction vehicles will be controlled through a Construction Environmental Management Plan (to be secured via an appropriately worded planning condition) to protect the SPA and Ramsar site.
- 3.4.17 In terms of vehicle traffic, nitrogen oxides (NO_x, i.e., NO and NO₂) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water. The Highways Agency²¹ state that the contribution of vehicle emissions from the roadside to local pollution levels is not significant beyond 200 metres from a road. The Proposed Development main car parking area is more than 400 m from the River Thames (drawing NFH-UNS-MAST-DR-1006), and the Proposed Development is c. 5.7 km from the SPA.
- 3.4.18 It has been assumed that only those roads forming part of the primary road network (motorways and 'A' roads) are likely to experience any significant increases in vehicle traffic as a result of the development. Although the SPA is adjacent to Lower Highham Road, it is c. 460 m from the A226/Rochester Road. Resultingly, no significant effect from traffic-related air pollution is considered likely.
- 3.4.19 It is therefore concluded that no likely significant effects will occur as a result of the Proposed Development, either alone or in combination with other plans and projects, on the Thames Estuary and Marshes SPA and Ramsar site due to nitrogen deposition.

¹⁹ Natural England (2015). Site Improvement Plan Essex Estuaries.

²⁰ Air Pollution Information System (2016) Nitrogen Deposition: Coastal Saltmarsh.

²¹ Highways Agency ((2007) Design Manual for Roads and Bridges, HA 207/07, Vol. 11, Section 3, Part 1 Air Quality.

Reduced Water Quality

- 3.4.20 The River Thames is adjacent to the site on the north-eastern boundary and links the site to the SPA. There is the potential for pollution to enter the watercourse during the construction phase and run-off to enter the watercourse during the operational phase, which could indirectly impact the SPA.
- 3.4.21 The pollution from the construction phase of the Proposed Development would be temporary and the proposals include pocket parks and other greenspaces, rain gardens, meadow planting, green roofs and woodland which will help to filter and slow down run-off.
- 3.4.22 London's Victorian sewage system discharges storm-sewage pollution into the river when capacity is reached²²; the biodiversity supported by the Thames is generally well adapted to changes in conditions due to this and the tidal nature of the estuary.
- 3.4.23 The construction phase of the Proposed Development has the potential to generate air-borne dust through dispersal during material movement, wind-blown particles from stored material and mud on roads disturbed by traffic movement, especially during periods of dry and windy weather. This will be controlled through a Construction Environmental Management Plan (to be secured via an appropriately worded planning condition) to protect the SPA and Ramsar site. Mitigation measures include, but are not limited to:
- Ensuring stockpiles are stored away from the site boundary, in particular the north-eastern boundary adjacent to the Thames;
 - Speed limits put in place for all vehicles on site;
 - Use of dust suppression and wheel-wash facilities as required; ensure any run-off water from dust suppression activities is disposed of in accordance with legal requirements;
 - Vehicles delivering loose soil are covered or sheeted.
- 3.4.24 It is therefore concluded that no likely significant effects will occur as a result of the Proposed Development, either alone or in combination with other plans and projects, on the Thames Estuary and Marshes SPA and Ramsar site due to water quality.

Air Pollution

- 3.4.25 Emissions from road and construction traffic has the potential to disperse towards the SPA, however the prevailing wind is from the south-west²³, i.e., away from the SPA.
- 3.4.26 It is therefore considered that the distance separating the Proposed Development and the SPA, in combination with the south-westerly prevailing wind, is sufficient to conclude that no likely significant effects will occur as a result of the Proposed Development, either alone or in combination with other plans and projects on the SPA.

Loss of Supporting Habitat

- 3.4.27 The habitats on-site comprise buildings, hardstanding, ephemeral vegetation, amenity grassland (football pitch), introduced shrub, species-poor hedge, seawall, standing water in two troughs, and scattered trees. The River Thames is adjacent to the site, however, these habitats are unlikely to support the bird species for which the SPA is designated (as confirmed by wintering and breeding bird surveys, Schofield Lothian 2022).
- 3.4.28 It is therefore concluded that no likely significant effects will occur as a result of the Proposed Development, either alone or in combination with other plans and projects, on the Thames Estuary and Marshes SPA and Ramsar site due to loss of supporting habitat.

²² Thames 21. Water quality Results.

²³ Met Office (2016) Southern England: climate.

3.5 Summary of Screening

- 3.5.1 The screening exercise undertaken to inform this HRA has concluded that likely significant effects remain as a result of the development in combination with other plans and projects through:
- Recreational pressure and disturbance due to the presence of residential properties within the 6 km Zol for the SPA/Ramsar site.
- 3.5.2 Therefore, further Appropriate Assessment is required, and this is considered in Section 4.
- 3.5.3 The screening exercise undertaken to inform this HRA has concluded that no likely significant effects will occur as a result of the development alone or in combination with other plans and projects through:
- Atmospheric nitrogen deposition,
 - Reduced water quality,
 - Air pollution,
 - Loss of supporting habitats.

4 Appropriate Assessment

4.1 Recreational Pressure and Disturbance

- 4.1.1 In the absence of appropriate avoidance/mitigation, a likely significant effect on Thames Estuary and Marshes SPA and Ramsar site could occur during the operational phase of the Proposed Development due to increased recreational pressure from new residents in combination with new residents associated with other schemes within the Zol. Although this has not been quantified through a detailed in combination assessment, employing the precautionary principle it is assumed as a reasonable worst-case scenario.
- 4.1.2 The potential for recreational pressure and disturbance to occur on the Thames Estuary and Marshes SPA and Ramsar site as a result of the Proposed Development requires mitigation.
- 4.1.3 The North Kent Strategic Access Management and Monitoring Scheme²⁴ provides guidance on suitable mitigation measures. There are currently two main mechanisms that provide funding for measures to avoid, and mitigate for, impacts on European sites: the Community Infrastructure Levy (CIL), or an individual planning obligation referred to as a Section 106. Large developments may be able to provide mitigation measures as part of the development, such as dedicated areas for dog walking.
- 4.1.4 The CIL places a levy on new development that then provides funding to meet local infrastructure requirements, enabling growth to proceed with adequate and maintained infrastructure in place. Section 106 agreements can be bespoke and specific to individual proposals.
- 4.1.5 Bird Wise, the recipients of the tariff, is a partnership of local authorities, developers and environmental organisations, and is the brand name for SAMMS. The Bird Wise Mitigation Strategy identifies mitigation measures that the Section 106 agreement payment will support, with the aim of reducing the adverse effects of the SPA/Ramsar from the Northfleet project to a level that is non-significant.
- 4.1.6 Gravesham Borough Council²⁵ state that *“Developers are requested to pay the full tariff of £314.05 for every new dwelling or non-C3 residential use, provided within 6 km of the Ramsar site and SPA and for*

²⁴ Liley, D. & Underhill-Day, J. (2013). Thames, Medway and Swale Estuaries – Strategic Access Management and Monitoring Strategy. Unpublished report by Footprint Ecology.

²⁵ Gravesham Borough Council. SAMMS tariffs.

larger housing developments beyond 6 km from them.” The fee is subject to inflation and will increase annually.

4.1.7 The Proposed Development will include the provision of significant planting and landscaping on-site to encourage residents to use on-site greenspaces and reduce pressure on the SPA/Ramsar site. As detailed in ES Volume 1, Chapter 14: Ecology and Biodiversity, in order to help manage operational footfall, and therefore reduce impacts on, nearby designated sites the following mitigation measures have been embedded within the design:

- The provision of adequate minimum on-site open space for operational amenity.
- The provision of an information centre/cafe within the Power Park, next to the play areas, to encourage walks around the site as opposed to within designated sites, and to provide information regarding notable species and habitats including relevant protection measures within the local area.

4.1.8 The following mitigation measures will be provided as part of the Proposed Development:

- Mixed woodland,
- Modified grassland,
- Pocket parks,
- Pedestrian priority public realm.

4.2 Calculating SAMM

4.2.1 The cost of implementing the mitigation measures will increase with inflation; the per dwelling tariffs will be updated each year. The cost per dwelling currently stands at £314.05. The final cost will need to be calculated at Reserved Matters stage as it is currently unknown how many properties would be within the 6 km Zone of Influence.

4.2.2 The Bird Wise Mitigation Strategy states *“Mitigation in relation to student accommodation, Houses in Multiple Occupation (HMOs), residential care homes, residential nursing homes, hotels, boarding and guest houses, hostels, holiday parks and all other residential institutions, will be considered on a case-by-case basis. Factors to consider will be proximity to the coastal areas, size of development and the likelihood of residents using the SPA for recreational activities. This is in keeping with advice received from Natural England in 2015.”*

4.2.3 With contributions to SAMMS provided in line with the above tariffs it would be possible to conclude that the Proposed Development will not lead to Likely Significant Effects on the Thames Estuary and Marshes SPA and Ramsar site.

4.2.4 The scheme will need to provide detailed dwelling numbers during Reserved Matters Application during the detailed design process and base payments off the specific number of dwellings.

5 Conclusion

5.1.1 The Proposed Development comprises a mixed-use development c. 5.7 km west of the Thames Estuary and Marshes SPA and Ramsar site. This increase in population is likely to cause an increase in recreational pressure on the SPA.

5.1.2 Plots 10, 11, 12 and 13 of the Proposed Development are within the 6 km ZoI for the Thames Estuary and Marshes SPA and Ramsar site. A financial contribution for the dwellings in these plots will be required.

5.1.3 This report to inform a shadow HRA has been able to determine that as a result of the Proposed Development of the land adjacent to the River Thames in Northfleet, in the borough of Gravesham in Kent, in relation to recreational pressure and disturbance, atmospheric nitrogen deposition, reduced

water quality, air pollution, and loss of supporting habitat there will be no likely significant effect on the Thames Estuary and Marshes SPA and Ramsar site, either as a result of the project alone, or in combination with any other plans or projects.

- 5.1.4 This conclusion is reached based on the payment of a financial contribution to Bird Wise and the inclusion of accessible greenspace within the Proposed Development to mitigate for the likely significant effect of recreational pressure and disturbance to the SPA that would otherwise result from the Proposed Development.

Appendix A Relevant Legislation

A.1 The Conservation of Habitats and Species Regulations 2017 (as amended)

- A.1.1 The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.
- A.1.2 Under the Regulations, competent authorities, *i.e.* government departments and public bodies, have a general duty to have regard to the EC Habitats Directive and Wild Birds Directive. The Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I and II of the Habitats Directive respectively) to the European Commission. The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs) classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites form a network termed Natura 2000. The Regulations enable the country agencies to enter into management agreements on land within or adjacent to a European site, in order to secure its conservation. The Regulations also provide for the control of potentially damaging operations, whereby consent from the country agency may only be granted once it has been shown through appropriate assessment that the proposed operation will not adversely affect the integrity of the site. When considering potentially damaging operations, the precautionary principle applies, *i.e.* consent cannot be given unless it is ascertained that there will be no adverse effect on the integrity of the site.
- A.1.3 The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a few purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

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Appendix C: Wintering Bird Survey Report

Northfleet Central 1 Ltd

Ecological Services

Wintering Bird Survey Report

Northfleet, Gravesham



Reference No.: TRI053

Date: August 2023

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Executive Summary

Purpose	The surveys were undertaken to determine the presence and/or absence of Schedule 1 and non-Schedule 1 bird species in and around the site a Northfleet, Gravesham, and to understand how they are using the site in both winter and summer. Summer surveys have been undertaken and are reported in a separate report (Schofield Lothian 2022). This report focuses on the winter results and assesses any avoidance, mitigation, compensation, and enhancement measures needed to avoid the Proposed Development causing an offence.
Introduction	A habitat survey was undertaken in May 2022, to support the planning application, which was submitted in September 2022, and remains valid. Whilst no overwintering habitat is present on the site due to the urban nature, the offsite habitats were assessed as they support suitable overwintering habitat. The suitable habitats identified included mudflats for foraging and foraging and roosting habitat in Robin's Creek. These habitats are connected by the River Thames to the Swanscombe Marshes SSSI and the Thames Estuary and Marshes SPA. Therefore, in order to establish if these habitats are functionally linked to either the SPA or SSSI, winter bird surveys were undertaken in the winter of 2022-2023. These were undertaken on 13th December 2022 and 23rd January 2023. In order to establish usage by wetland birds which would overwinter on the mudflat habitats and Robin's Creek identified adjacent to the application site (including Annex 1 and Schedule 1 species) were undertaken based on the British Trust for Ornithology's (BTO's) Wetland Bird Surveys (WeBS) methodology. Core counts of wetland birds were taken, and two intertidal (low tide) surveys were undertaken in December 2022 and January 2023. These surveys were extended to include the noting of potential disturbance events and any reactions shown by the birds in order to establish a basic baseline of what disturbance levels the birds on the mudflats may already be habituated to due to the sand and gravel works and Seacon Terminals which they currently neighbour.

Key Findings	During the surveys no Annex 1 species that use the Thames Estuary and Marshes SPA in internationally important populations were found to be using the mudflats or Robin's Creek. One of the species the Thames Estuary and Marshes SPA supports in internationally important numbers of regularly occurring migratory species was found to be using the site: redshank (<i>Tringa tetanus</i>) and one nationally important migratory species the SPA supports: teal (<i>Anas crecca</i>). One other species which contributes to the internationally important waterfowl assemblage within the Thames Estuary and Marshes SPA was found on site: shoveler (<i>Anas clypeata</i>). Whilst these species were found on site these were all in low numbers with a singular redshank foraging on the mudflats on both surveys. Peak counts of 3no. teal using Robin's Creek on the first survey on (13th December 2022) and 14no. using the mudflats briefly whilst travelling from east to west up the Thames on the second survey (23rd January 2023) and 6no. in Robin's Creek. Peak counts of 2no. shoveler were seen on the mudflats on the second survey. Peak counts of other wading and waterfowl species (gulls excluded) were on the first survey (13th December 2022) in Robin's Creek: 2no. mallard (<i>Anas platyrhynchos</i>) and on the mudflats 2no. oystercatcher (<i>Haematopus ostralegus</i>). On the second survey on 23rd January 2023 peak counts of other birds were in Robin's Creek 3no. coot (<i>Fulica atra</i>) and on the mudflats 2no. mallard. Higher counts of other waterfowl were noted flying up from east to west up the Thames without stopping at the site on the survey on 23rd January 2023. The overall number and species counted during the surveys do not make up numbers of national or international importance and when compared to the 5-year peak mean population of species at the Thames Estuary Marshes for example for redshank this is 3,251 birds. This suggests that the relative importance of this area of mudflats and Robin's Creek is of limited importance to overwintering birds' species. Additionally, it should be noted that this mudflat is already subject to disturbance from the sand and gravel works and other industrial uses, such as the Seacon Terminals. During the first survey a crane was being used to load a boat with gravel for the whole of the survey time including with workers walking back and forth. No disturbance behaviours were noted of the waterfowl using the mudflats during this time and the waterfowl appeared to forage as normal. Due to the low numbers of overwintering waterfowl using the habitats next to the Proposed Development it is thought that neighbouring habitats do not provide functionally linked overwintering habitats to the SSSI or SPA of any significant value. Therefore, it is thought that any disturbance generated by the construction will not be significant on overall overwintering populations so will not have an effect on the favourable conservation status of Interest features of the SPA.
Recommendations	Whilst the habitats next to the Proposed Development are already subject to disturbance from the sand and gravel works and other surrounding industrial uses, best practice guidelines will be followed during the demolition and construction of the Proposed Development to ensure no adverse effects to the limited populations of waterfowl using the foraging and roosting habitats of the mudflats and Robin's Creek. These will be fully detailed in the CEMP but will include methods such as visual and noise barriers between the site and these habitats and specific methodologies to noisy works such as slow starts for piling to limit disturbance. Further surveys should be undertaken during RMA to ensure the baseline data is up to date, but the current assessment (alongside data from London Resort) is that the mudflats and Robin's Creek habitats next to the Proposed Development do not provide functionally linked overwintering habitats to the SSSI or SPA of any significant value so there will not be an effect on the favourable conservation status of Interest features of the SPA and it is considered proportionate.

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1 Introduction

- 1.1.1 Schofield Lothian, which as of January 2023 will be trading as Assystem Energy & Infrastructure Ltd, was commissioned by Northfleet Central 1 Ltd to undertake bird surveys in the summer of 2022 and the winter of 2022-2023. Summer survey results can be found in the Bird Survey report (Schofield, 2022), which can be found in **ES Volume 3, Appendix: Ecology and Biodiversity, Annex 3**. This report will cover the wintering bird surveys only.
- 1.1.2 The initial Phase one habitat survey (Schofield, 2022), which can be found in **ES Volume 3, Appendix: Ecology and Biodiversity, Annex 1** found the Proposed Development supported foraging and roosting habitat for overwintering birds on land neighbouring the red line boundary of the site. Foraging habitat is present in mudflats and roosting with a small amount of foraging is present in Robin's Creek.
- 1.1.3 The Proposed Development is connected by the Thames to SSSI site of Swanscombe Marshes around 600m along the Thames notified under Section 28 of the Wildlife and Countryside Act 1981. The SSSI is known to support notable species of bird such shelduck (*Tadorna tadorna*) and little egret (*Egretta garzetta*) in both its saltmarsh habitats and intertidal mudflats and Schedule 1 species such as little ringed plover (*Charadrius dubius*). Whilst the SSSI is only designated for breeding birds it is likely that the habitats support assemblages of overwintering birds. The neighbouring habitats (Robin's Creek and the mudflats) to the Proposed Development could also hold the potential of being a stoppage point on a journey of overwintering birds from the Thame Estuary and Marshes SPA, which supports significant number of internationally important wild birds to the Swanscombe Marshes.
- 1.1.4 The Thames Estuary and Marshes SPA qualifies as a SPA under 4.1 and 4.2 of the EU Birds Directive by supporting three kinds of internationally important population: of regularly occurring Annex 1 species, regularly occurring migratory species and assemblage of waterfowl.
- 1.1.5 The species listed on Annex 1 that use the Thames Estuary and Marshes in internationally important populations are avocet (*Recurvirostra avosetta*) and hen harrier (*Circus cyaneus*). Other non-qualifying, Annex 1 species that regularly occur on the European marine site include common tern (*Sterna hirundo*), Bewick's swan (*Cygnus columbianus bewickii*), golden plover (*Pluvialis apricaria*), and ruff (*Philomachus pugnax*).
- 1.1.6 The Thames Estuary supports internationally important numbers of regularly occurring migratory ringed plover (*Charadrius hiaticula*), grey plover (*Pluvialis squatarola*), dunlin (*Calidris alpina*), knot (*Canutus islandica*), black-tailed godwit (*Limosa limosa*) and redshank (*Tringa tetanus*). Nationally important populations include shelduck (*Tadorna tadorna*), teal (*Anas crecca*) and pintail (*Anus acuta*).
- 1.1.7 Other species which contribute to the internationally important waterfowl assemblage within the Thames Estuary and Marshes SPA which rely less on mudflats and more on the surrounding grazing marsh habitats include gadwall (*Anas strepera*), shoveler (*Anas clypeata*), tufted duck (*Aythya fuligula*) and pochard (*Aythya farina*).
- 1.1.8 As mudflats are a rich source of invertebrates, they have the potential to provide feeding grounds for wintering species including the avocet, dunlin, knot and black- tailed godwit. These surveys will identify if the mudflats are being used by any of the species for which the SPA is designated in significant numbers to assess whether the Proposed Development could have an effect on the favourable conservation status of Interest features of the SPA.

- 1.1.9 By undertaking an investigation of the habitats and species present in both summer and winter, this report, along with a review of the London Resort Application surveys, will provide a greater understanding of the ecological value of the area and immediate surrounding areas for birds. It identifies any potential risks, obligations and restrictions that may be necessary to guarantee compliance with wildlife legislation.
- 1.1.10 Surveys were led by Joanna Meredith an ecologist with over five years' experience with a wide range of ornithology experience, with the most relevant experience being two years of conducting disturbance surveys on a SSSI designated for a significant overwintering wildfowl accumulations, supported by Molly Richardson and ecologist with 4 years' experience including ornithology experience and Mirza Rashid and ecologist with two years' experience.

1.2 Site Description

- 1.2.1 Due to the scale of the site, it was split into three areas referred to as:
- RLB South;
 - RLB North-East; and
 - RLB North-West.
- 1.2.2 Only areas deemed to have the potential to support Schedule 1 nesting birds in the PEA were assessed during the bird surveys. All of these are in the RLB North-East area of the site.
- 1.2.3 The habitat assessed to have potential to support Schedule 1 bird species both on and next to the site are as follows:
- Sand and Gravel Works (onsite);
 - Mudflats (offsite); and
 - Robin's Creek (otherwise known as Northfleet Harbour) (offsite).
- 1.2.4 These habitats are detailed in the Phase 1 habitat map in Appendix A. The Target Note numbers within the extended Phase 1 habitat map in Appendix A correspond to the following points of ecological interest within the site.
- TN1 – Intertidal mudflats;
 - TN2 – Shingle beach above high tide mark; and
 - TN3 – Robin's Creek.

Mudflats

- 1.2.5 Intertidal mudflats are present on the north-east boundary of the site at low tide, Target Note 1 in the map on Appendix A, which extend for at least 50m into the Thames. These are gently sloping mudflats which turn into a shingle beached area which is above the tide line on the edge of the flood wall of the Thames. Some commercial piers/loading docks are present in this area providing further habitat for food for waterbirds. This habitat is connected by the Thames to SSSI site of Swanscombe Marshes around 600 m along the Thames.
- 1.2.6 During the PEA a range of waterbirds were seen foraging on the mudflats next to the site including shelduck along with herring gulls, black headed gulls, female shoveler with young and mallards. Bird surveys are needed to understand the use of the mudflats for foraging by waterbirds which may be coming from the SSSI both in summer and winter months to cover both breeding and overwintering species.

- 1.2.7 The gravel beach area, Target Note 2 on the map in Appendix A, is suitable for little ringed plover to use for nesting (a Schedule 1 species) and are known to be in the area.

Robin's Creek

- 1.2.8 Robin's Creek, Target Note 3 in the habitat map in Appendix A, provides suitable nesting, foraging and overwintering habitat to a range of birds and waterfowl including Schedule 1 birds which have additional protections from disturbance whilst nesting. Cetti's Warbler was seen and heard during the PEA in the Creek area adjacent to south boundary of the RLB North-East area of the site within suitable breeding habitat. Whilst it is more likely that the Swanscombe Peninsula would be more favourable, the reedbeds at the Robin's Creek may also provide suitable nesting habitat for marsh harrier (*Circus aeruginosus*).

1.3 Scope of Works

- 1.3.1 The survey objectives were to:
- Carry out an assessment of the habitat identified with the potential to support Schedule 1 wintering birds to confirm presence of wintering on site and in the immediate surrounding areas; and
 - Carry out an assessment of the habitat identified as having the potential to support assemblages of wildfowl in summer and winter to understand the importance of the habitat as a foraging area for birds from the Swanscombe Marshes SSSI.

1.4 Quality Assurance

- 1.4.1 All lead AEIL ecologists are members of (at the appropriate level) the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct when undertaking ecological work.

2 Methodology

2.1 Bird survey

- 2.1.1 In order to establish usage by wetland birds which would overwinter on the mudflat habitats and Robin's Creek identified adjacent to the application site (including Annex 1 and Schedule 1 species) and a rough baseline of disturbance, intertidal (low tide) surveys were undertaken twice within the winter season of 2022/2023 these were a mixture of disturbance and to establish the baseline.
- 2.1.2 The visual bird disturbance survey method was a modified version of the Wetland Bird Survey (WeBS) core count 'Look-See' method (Bibby et al., 2000) which allowed both species counts to be undertaken and disturbance behaviour of the birds to be recorded.
- 2.1.3 Different vantage points (VP) were selected to provide the best visual coverage of the survey area. The selection of the vantage points was limited due to access.
- 2.1.4 Two hours were spent on the vantage point overlooking the mudflats and one hour was spent on the Robin's Creek. This time was considered proportionate as the survey area was walked at a slow and methodical pace and was appropriate in relation to the habitat and species recorded during the survey.

- 2.1.5 For the first five minutes spent at each VP, weather conditions were recorded, and surveyors counted individually all nationally important species e.g. shoveler, tufted duck and pochard and a total count of other wildfowl and water bird species present. Any evidence of breeding behaviour was noted.
- 2.1.6 Potential disturbance events were also noted to understand a baseline of what the birds react to. Disturbance behaviour of waterfowl is defined as any behaviour shown by the birds that constituted a diversion from normal behaviour. These behaviours were noted on the map by the surveyor doing the waterfowl count.
- 2.1.7 Surveys were conducted at dawn to get the highest level of bird activity. Surveys were timed for when low tide coincided with dawn in order to see the full extent of the mudflats and use of this habitat by birds.

3 Limitations

- 3.1.1 There was no access to the sand and gravel pits on-site however the mudflats and Robin's Creek were viewed from the Thames pathway which is currently diverted to a route that runs to the southeast of Robin's Creek to the Thames barrier. A high specification spotting scope was used to view the site mudflats and Robin's Creek from vantage points selected on the Thames pathway, so the surveys were able to correctly identify all species on the mudflats and the shingle beach from the viewpoints. Limited areas where blocked from view from the pier however this was not thought to be a significant limitation due to the length of time these areas were observed and the use of identification of bird calls. No areas within the red line boundary of the site were deemed as suitable habitat for overwintering birds due to the developed nature of the site meaning lack of suitable habitat. Therefore, the lack of access is not deemed to have limited the surveys.

4 Results

4.1 Wintering Bird Surveys

- 4.1.1 Table 4-1 details the weather conditions at the time of the surveys.

Table 4-1: Weather conditions during survey

Parameter	Survey 1	Survey 2
Date(s)	13/12/2022	23/01/2023
Start time and finish time	07:30 to 09:30	07:00 to 10:00
Temperature (°C)	0	2
Cloud Cover (%)	0	0
Wind (Beaufort Scale)	0	1
Precipitation	None (snow forecast)	None

- 4.1.2 Table 4-2 details the bird species recorded from Vantage Point 1 during the surveys and Table 4-3 details the bird species recorded from Vantage Point 2 during the surveys. The locations are detailed in Appendix B.

Table 4-2: Bird species recorded from Vantage Point 1 - Mudflats

Species Name	Number	Notes	Schedule 1
Survey 1			
Redshank (<i>Tringa tetanus</i>)	1	Foraging on mudflats	-
Oystercatcher (<i>Haematopus ostralegus</i>)	2	Foraging on mudflats	-
Herring Gull (<i>Larus argentatus</i>)	8	Seen foraging on mudflats north of the gravel loading pier.	-
Blackheaded Gull (<i>Chroicocephalus ridibundus</i>)	1	Observed flying north over the site up the Thames.	-
Survey 2			
Redshank (<i>Tringa tetanus</i>)	1	Foraging on mudflats	-
Teal (<i>Anas crecca</i>)	14	Observed travelling from the west and landing on the water in front of the gravel works area. 7 minutes later 8no. teals then flew north-east up the Thames. The remaining birds remained on the water for the rest of the survey.	-
Shoveler (<i>Anas clypeata</i>)	2	Observed briefly on mudflats and flew into the river.	-
Mallard (<i>Anas platyrhynchos</i>)	12	Seen flying north and south along the Thames past the site.	-
Canada Goose (<i>Branta canadensis</i>)	3	Seen flying north along the Thames past the site.	-

Table 4-3: Bird species recorded from Vantage Point 2 – Robin's Creek

Species Name	Number	Notes	Schedule 1
Survey 1			
Teal (<i>Anas crecca</i>)	3	Observed resting in Robin's Creek	-
Mallard (<i>Anas platyrhynchos</i>)	2	Observed resting in Robin's Creek	-
Survey 2			
Teal (<i>Anas crecca</i>)	6	Observed resting in Robin's Creek	-
Coot (<i>Fulica atra</i>)	3	Observed resting in Robin's Creek	-

5 Assessment

- 5.1.1 During the surveys no Annex 1 species that use the Thames Estuary and Marshes SPA in internationally important populations were found to be using the mudflats or Robin's Creek.
- 5.1.2 One of the species the Thames Estuary and Marshes SPA supports in internationally important numbers of regularly occurring migratory species was found to be using the site: redshank (*Tringa tetanus*) and one nationally important migratory species the SPA supports: teal (*Anas crecca*). One other species which contribute to the internationally important waterfowl assemblage within the Thames Estuary and Marshes SPA was found on site shoveler (*Anas clypeata*). Whilst these species were found on site these

were all in low numbers with a singular redshank foraging on the mudflats on both surveys. Peak counts of 3no. teal using Robin's Creek on the first survey and 14no. using the mudflats briefly whilst travelling from west to east up the Thames on the second survey and 6no. in Robin's Creek. Peak counts of shoveler were 2no. seen on the mudflats on the second survey. Peak counts of other wading and waterfowl species (gulls excluded) were seen on the first survey in Robin's Creek 2no. mallards and on the mudflats 2no. oystercatchers. On the second survey peak counts of other birds were in Robin's Creek 3no. coots and on the mudflats 2no. mallards. Higher counts of other waterfowl were noted flying up from east to west up the Thames without stopping at the site.

- 5.1.3 The overall number and species counted during the survey do not make up numbers of national or international importance and when compared to the 5-year peak mean population of species at the Thames Estuary Marshes for example for Redshank this is 3,251 birds this suggests that the relative importance of this area of mudflats and Robin's Creek is of limited importance to overwintering bird species.
- 5.1.4 The mudflat is already subject to disturbance from the sand and gravel works. During the first survey a crane was being used to load a boat with gravel for the whole of the survey time including with workers walking back and forth. No disturbance behaviours were noted of the waterfowl using the mudflats during this time and the waterfowl appeared to forage as normal.
- 5.1.5 Due to the low numbers of overwintering waterfowl using the habitats next to the Proposed Development it is thought that neighbouring habitats do not provide functionally linked overwintering habitats to the SSSI or SPA of any significant value. Therefore, it is thought that any disturbance generated by the demolition and construction phases of the Proposed Development will not be significant on overall overwintering populations so will not have an effect on the favourable conservation status of Interest features of the SPA.
- 5.1.6 There will be no loss of direct loss of overwintering habitat from the demolition and construction phases of the Proposed Development.
- 5.1.7 Overshadowing has been measured and the only area of overshadowing was concentrated on terrestrial land and not on Robin's Creek or the mudflats. If designs should alter the overshadowing should be re-measured to see if this is expected to have any effect on the invertebrate populations within the mudflats or Robin's Creek leading to long term loss of habitat. If any overshadowing is expected the mudflats are not of foraging significance.

Internationally important populations of regularly occurring Annex 1 species.

Species	Population (5 yr peak mean 1993/94 - 1997/98)*
Avocet (<i>Recurvirostra avosetta</i>)	283 birds 28.3 % Great Britain

Internationally important populations of regularly occurring migratory bird species.⁶

Species	Population (5 yr peak mean 1993/94 - 1997/98)*
Ringed Plover (<i>Charadrius hiaticula</i>)	1,324 birds 2.6% Europe /North Africa
Grey Plover (<i>Pluvialis squatarola</i>)	2,593 birds 1.7% Eastern Atlantic
Dunlin (<i>Calidris alpina alpina</i>)	29,646 birds 2.1% Northern Siberia/Europe/West Africa
Knot (<i>Calidris canutus islandica</i>)	4,848 birds 1.4% North West Europe
Black-tailed Godwit (<i>Limosa limosa</i>)	1,699 birds 2.4% Iceland
Redshank (<i>Tringa totanus totanus</i>)	3,251 birds 2.2% Eastern Atlantic

An internationally important assemblage of waterfowl.

Importance	Population (5 yr peak mean 1993/94 - 1997/98)*
Thames Estuary supports large populations of wintering waterfowl.	75,019 individual birds _

6 Recommendations & Enhancements

- 6.1.1 No further surveys are recommended.
- 6.1.2 The impacts of displacement on overwinter birds are anticipated overall to be at worst minor adverse which is non-significant (if demolition and construction is undertaken in the winter), given the low concentrations of birds recorded during the wintering bird surveys. As a precautionary approach, works bounding Robin's Creek and the River Thames could be undertaken April to August inclusive, reducing impacts to negligible.

6.2 Design

- 6.2.1 Specific black redstart mitigation is included in the landscaping design with brown roofs with features to encourage insects such as puddle pools and stone and log piles, foraging habitat and ledges and nest boxes to be installed on site in inaccessible areas.
- 6.2.2 A tree line will be used to limit visual disturbance from public on the Robin's Creek.
- 6.2.3 Guided walks and pathways will be designed to encourage the public to walk around the site area rather than onto sensitive areas for birds such as the SSSI.

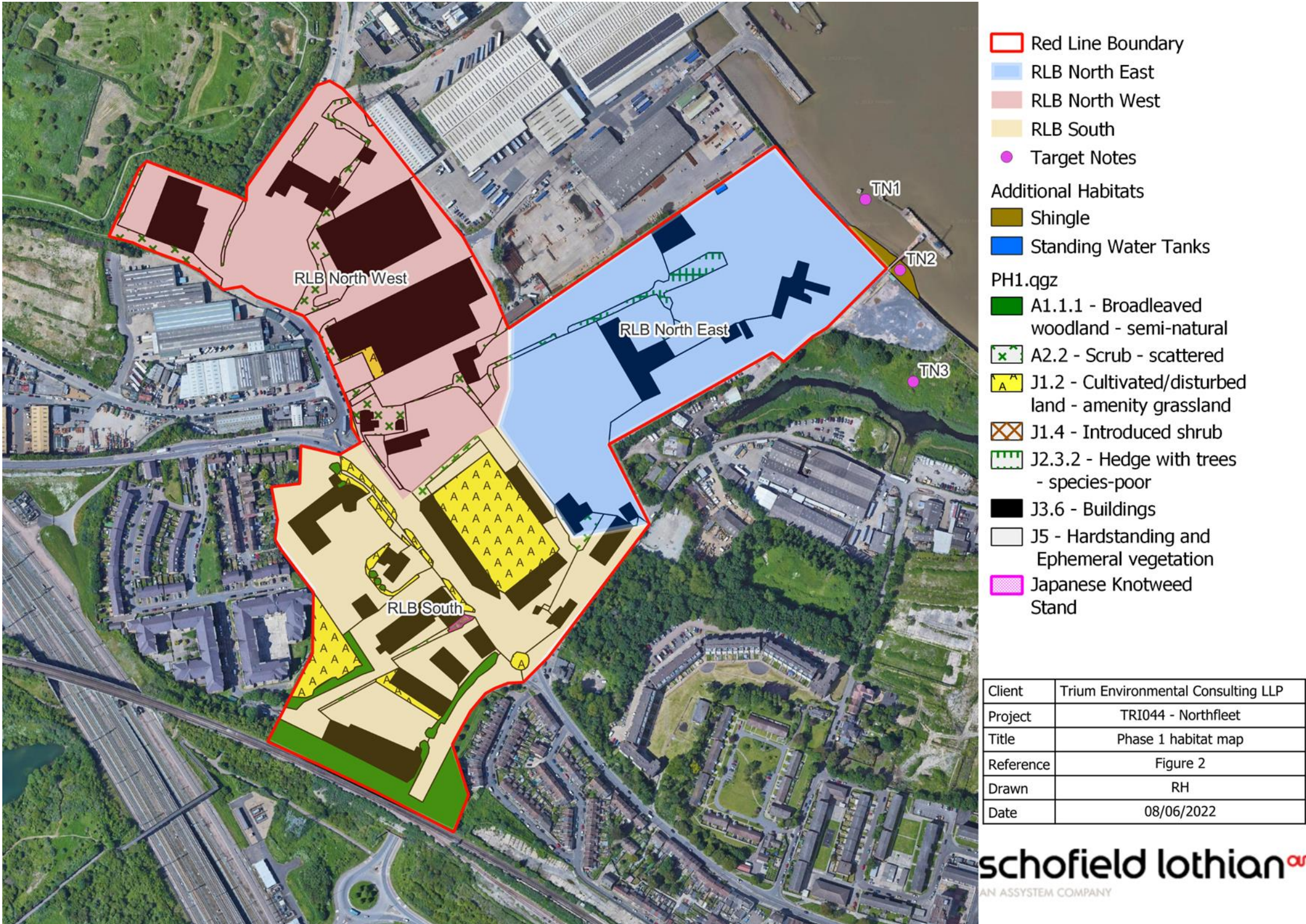
6.3 Enhancement Measures

- 6.3.1 The National Planning Policy Framework (NPPF) outlines government planning policies and how they should be applied within local authorities. The framework places an emphasis on sustainable development, encouraging the re-use of land that has previously been developed overusing land that has a higher environmental value and by minimising impacts on biodiversity. The NPPF states that

developments should aim to conserve or enhance biodiversity and encourages opportunities to incorporate biodiversity in and around developments.

- 6.3.2 Taking the requirements of NPPF into account, North Kent Marshes are over 10km away so should not be affected by the Northfleet works however there is a North Kent Catchment Improvement Plan. The project could carry out some of the actions on the improvement plan through volunteering in order to improve North Kent Marshes which would improve the wider area for bird species found at the Northfleet site. These actions include practical action days to improve habitat such as litter picks and management of bankside vegetation.
- 6.3.3 A range of bird boxes and insect boxes could be added to the planting and retained trees to increase the local bird population. Suitable wildlife boxes can be bought from a number of retailers and further advice, if necessary, can be provided by Assystem on construction and siting arrangements.

Appendix A Phase 1 Habitat Map



Appendix B Wintering Bird Survey Map 1



Key:

- ✕ Vantage Point 1
- ✕ Vantage Point 2



Client	Trium Environmental Consulting LLP
Project	TRI053
Title	Winter Bird Survey 1 Map
Reference	Appendix B
Drawn	JM
Date	16/02/2023

Appendix C Wintering Bird Survey Map 2



Key:

- ⊗ Vantage Point 1
- ⊗ Vantage Point 2



Client	Trium Environmental Consulting LLP
Project	TRI053
Title	Winter Bird Survey 2 Map
Reference	Appendix C
Drawn	JM
Date	16/02/2023

Appendix D Relevant Legislation

D.1 NPPF

- D.1.1 The NPPF outlines government planning policies and how they should be applied within local authorities. The framework places an emphasis on sustainable development, encouraging the re-use of land that has previously been developed over using land that has a higher environmental value and by minimising impacts on biodiversity. The NPPF states that developments should aim to conserve or enhance biodiversity and encourages opportunities to incorporate biodiversity in and around developments

D.2 The Conservation of Habitats and Species Regulations 2017

- D.2.1 The Conservation of Habitats and Species Regulations 2017 consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.
- D.2.2 Under the Regulations, competent authorities i.e. government departments and public bodies, have a general duty to have regard to the EC Habitats Directive and Wild Birds Directive. The Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I and II of the Habitats Directive respectively) to the European Commission. The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs) classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites form a network termed Natura 2000. The Regulations enable the country agencies to enter into management agreements on land within or adjacent to a European site, in order to secure its conservation. The Regulations also provide for the control of potentially damaging operations, whereby consent from the country agency may only be granted once it has been shown through appropriate assessment that the proposed operation will not adversely affect the integrity of the site. When considering potentially damaging operations, the precautionary principle applies i.e. consent cannot be given unless it is ascertained that there will be no adverse effect on the integrity of the site.
- D.2.3 The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a few purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

D.3 The Wildlife and Countryside Act (WCA) 1981 (as amended)

- D.3.1 The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Habitat Regulations 2010

(as amended), offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

- D.3.2 Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species. All relevant species-specific legislation is detailed later in this Appendix.
- D.3.3 Schedule 1 – Part 1 relates to birds and their young, for which it is an offence to intentionally or recklessly disturb at, on or near an ‘active’ nest. Schedule 1 – Part 2 relates to birds afforded special protection during the close season which is 1 February to 31 August (21 February to 31 August below high-water mark), but which may be killed or taken outside this period.

D.4 The Countryside and Rights of Way (CROW) Act 2000

- D.4.1 The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife.
- D.4.2 Legislation detailed in the WCA places a duty on government departments and the National Assembly for Wales to have regard for biodiversity and provides increased powers for the protection and maintenance of SSSIs. The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

D.5 The Natural Environment and Rural Communities (NERC) Act 2006

- D.5.1 Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity. These lists superseded Section 74 of the CROW Act 2000.

D.6 UK Biodiversity Action Plan

- D.6.1 The United Kingdom Biodiversity Action Plan (UK BAP), first published in 1994 and updated in 2007, was a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UK BAP contained a list of priority habitats and species of conservation concern in the UK and outlined biodiversity initiatives designed to enhance their conservation status. Lists of Broad and Local habitats were also included. The priority habitats and species correlated with those listed on Section 41 and 42 of the NERC Act.
- D.6.2 The UK BAP required that conservation of biodiversity be addressed at a County level through the production of Local BAPs. These were complementary to the UK BAP, however, were targeted towards species of conservation concern characteristic of each area. In addition, several local authorities and large organisations have produced their own BAPs.

D.7 Species and Habitats of Material Consideration for Planning in England

- D.7.1 In 2011, the government published the ‘Biodiversity 2020: A strategy for England’s wildlife and ecosystem services’ to replace the previous England Biodiversity Strategy. In 2012 the UK BAP was replaced by the UK Post-2010 Biodiversity Framework.

D.7.2 Previous planning policy (and some supporting guidance which is still current, e.g. ODPM Circular 06/2005, now under revision), refers to UK BAP habitats and species as being a material consideration in the planning process. Equally many local plans refer to BAP priority habitats and species. Both remain as material considerations in the planning process, but such habitats and species are now described as Species and Habitats of Principal Importance for Conservation in England, or simply priority habitats and priority species under the UK Post-2010 Biodiversity Framework. The list of habitats and species remains unchanged and is still derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006. As was previously the case when it was a BAP priority species hen harrier continues to be regarded as a priority species although it does not appear on the Section 41 list.

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Appendix D: TVIA Residual Effects Tables

Table 1.1: Summary of likely effects on townscape receptors, inclusive of demolition and construction cumulative effects. Effects which are significant are highlighted in the blue boxes.

	Name	Townscape Value	Susceptibility to Change	Sensitivity	Magnitude of Impact (Demolition and Construction)	Likely Effect (Demolition and Construction)	Likely Effect (Demolition and Construction, Tier 1)	Likely Effect (Demolition and Construction, Tier 2)	Magnitude of Impact (Completed Development)	Likely Effect (Completed Development)	Likely Effect (Cumulative Tier 1)	Likely Effect (Cumulative Tier 2)
1	Mixed-use/commercial estate	Low	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	High	Moderate Beneficial	Moderate Beneficial	Major Beneficial
2	Traditional town centre	Medium	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor Moderate Beneficial	Minor Moderate Beneficial	Minor Moderate Beneficial
3	20th century housing	Medium	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor Moderate Beneficial	Minor Moderate Beneficial	Minor Moderate Beneficial
4	Green Space	Medium	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Low	Minor Beneficial	Minor Beneficial	Moderate Beneficial
5	Industrial	Low	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	High	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial
6	River Thames	Medium	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor Moderate Beneficial	Minor Moderate Beneficial	Minor Moderate Beneficial



Table 1.2: Summary of likely effects on visual receptors, inclusive of demolition and construction cumulative effects. Effects which are significant are highlighted in the blue boxes.

	Location	Visual Amenity Value	Visual Receptors	Susceptibility to Change	Sensitivity	Magnitude of Impact (Demolition and Construction)	Likely Effect (Demolition and Construction)	Likely Effect (Demolition and Construction, Tier 1)	Likely Effect (Demolition and Construction, Tier 2)	Magnitude of Impact (Completed Development)	Likely Effect (Operation)	Likely Effect (Cumulative Tier 1, operation)	Likely Effect (Cumulative Tier 2, operation)
1	Gray's Beach Riverside Park - Pier	Low	Users of amenity space	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
2	Tilbury Fort	Medium	Visitors	Medium	Medium	Very Low	Negligible Neutral	Negligible Neutral	Negligible Neutral	Low	Minor to Moderate Neutral	Minor to Moderate Neutral	Minor to Moderate Neutral
			Pedestrians	Medium	Medium	Very Low	Negligible Neutral	Negligible Neutral	Negligible Neutral	Low	Minor to Moderate Neutral	Minor to Moderate Neutral	Minor to Moderate Neutral
3	Galley Hill Road / High Street junction	Low	Road users	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
			Pedestrians	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
4	Galley Hill Road rail intersection	Low	Road users	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
			Pedestrians	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
5	High Street / Lawn Road junction	Low	Road users	Low	Low	Nil	None	None	None	Nil	None	None	None
			Pedestrians	Low	Low	Nil	None	None	None	Nil	None	None	None
6	Walkway between Stanhope Road and train tracks (looking east)	Low	Pedestrians	Low	Low	Low	Minor Adverse	Minor Adverse	Minor Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Moderate to Major Beneficial



	Location	Visual Amenity Value	Visual Receptors	Susceptibility to Change	Sensitivity	Magnitude of Impact (Demolition and Construction)	Likely Effect (Demolition and Construction)	Likely Effect (Demolition and Construction, Tier 1)	Likely Effect (Demolition and Construction, Tier 2)	Magnitude of Impact (Completed Development)	Likely Effect (Operation)	Likely Effect (Cumulative Tier 1, operation)	Likely Effect (Cumulative Tier 2, operation)
7	Green Space to the west of Manor Way (looking south)	Low	Pedestrians	Low	Low	Very Low	Negligible Neutral	Negligible Neutral	Negligible Neutral	Low	Minor Beneficial	Minor Beneficial	Minor Beneficial
			Users of amenity space	Low	Low	Very Low	Negligible Neutral	Negligible Neutral	Negligible Neutral	Low	Minor Beneficial	Minor Beneficial	Minor Beneficial
8	Robinson Way / Black Eagle Drive junction	Low	Local residents	Medium	Medium	Medium	Minor to Moderate Adverse	Minor to Moderate Adverse	Minor to Moderate Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
9	Ebbsfleet International Car Park C (looking north)	Low	Road users	Low	Low	Nil	None	None	None	Nil	None	None	None
			Commuters	Low	Low	Nil	None	None	None	Nil	None	None	None
10	Thames Way roundabout	Low	Road users	Low	Low	Very Low	Negligible Neutral	Negligible Neutral	Negligible Neutral	Low	Minor Neutral	Minor Neutral	Minor Neutral
11	Station Road	Low	Local residents	Low	Low	Nil	Minor Adverse	Minor Adverse	Minor Adverse	None	None	None	None
			Commuters	Low	Low	Nil	Minor Adverse	Minor Adverse	Minor Adverse	None	None	None	None
12	Stonebridge Road (looking north)	Very Low	Local residents	Low	Low	Very Low	Minor Adverse	Minor Adverse	Minor Adverse	Low	Minor Neutral	Minor Neutral	Minor Neutral
			Road users	Low	Low	Very Low	Minor Adverse	Minor Adverse	Minor Adverse	Low	Minor Neutral	Minor Neutral	Minor Neutral
13	Railway Street / Hamerton Road junction	Low	Local residents	Medium	Medium	Low	Minor to Moderate Adverse	Minor to Moderate Adverse	Minor to Moderate Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
			Road users	Medium	Medium	Low	Minor to Moderate Adverse	Minor to Moderate Adverse	Minor to Moderate Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial



	Location	Visual Amenity Value	Visual Receptors	Susceptibility to Change	Sensitivity	Magnitude of Impact (Demolition and Construction)	Likely Effect (Demolition and Construction)	Likely Effect (Demolition and Construction, Tier 1)	Likely Effect (Demolition and Construction, Tier 2)	Magnitude of Impact (Completed Development)	Likely Effect (Operation)	Likely Effect (Cumulative Tier 1, operation)	Likely Effect (Cumulative Tier 2, operation)
			Pedestrians	Medium	Medium	Low	Minor to Moderate Adverse	Minor to Moderate Adverse	Minor to Moderate Adverse	Medium	Minor to Moderate Beneficial	Minor to Moderate Beneficial	Minor to Moderate Beneficial
14	The Creek / Grove Road	Very Low	Industrial workers	Very Low	Very Low	Low	Minor Neutral	Minor Neutral	Minor Neutral	High	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial
15	Grove Road / Stonebridge Road roundabout	Low	Road users	Low	Low	Medium	Minor to Moderate Adverse	Minor to Moderate Adverse	Minor to Moderate Adverse	High	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial
16	Tilbury Fort Quay	Medium	Visitors	Medium	Medium	Very Low	Negligible Neutral	Negligible Neutral	Negligible Neutral	Low	Minor to Moderate Neutral	Minor to Moderate Neutral	Minor to Moderate Neutral
			Pedestrians	Medium	Medium	Very Low	Negligible Neutral	Negligible Neutral	Negligible Neutral	Low	Minor to Moderate Neutral	Minor to Moderate Neutral	Minor to Moderate Neutral

