



ACJ[®] *ecology*

Shadow Habitats Regulations Assessment

Land at Dalefield Way (East), Gravesend, DA12 2FL

April 2026

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Project: Land at Dalefield Way (East), Gravesend, DA12 2FL

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Table of Contents

1.0	Non-technical Summary
2.0	Introduction and Purpose
	Legislative Context and Scope
	Assessment Methodology and Expertise
	Consideration of Avoidance and Mitigation Measures
3.0	Legislative and Policy Framework
	Habitats and Birds Directives
	Relevant Case Law
	Local Planning Policy
4.0	Site Context and Designated Features
	Application Site Context
	Thames Estuary and Marshes Ramsar site/SPA Description
	Ramsar Qualifying Features
	SPA Qualifying Features
	SPA Conservation Objectives
	South Thames Estuary and Marshes SSSI Description
	SSSI Qualifying Features
5.0	Assessment of Likely Significant Effects and Site Integrity
	Assessment of Potential Impact Pathways
	Appropriate Assessment
	Physical Damage and Hydrological Impacts (Alone and In-Combination)
	Disturbance – Noise, Lighting, Vibration and Visual (Alone and In-Combination)
	Air Quality Effects (Alone and In-Combination)
	Recreational Disturbance Effects (Alone and In-Combination)
	Assessment Method for Determining Effects on Site Integrity
6.0	Summary and Conclusions

1.0 Non-technical Summary

1.1 ACJ *ecology* has assessed the potential impacts of the proposed development at Land at Dalefield Way (East), Gravesend, DA12 2FL, with specific regard to any likely effects on International/European Designated Sites.

1.2 This assessment has been prepared to assist the local planning authority, Gravesham Borough Council, in meeting its obligations under the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations), in particular Regulation 63. The key findings are as follows:

- Potential for direct impacts to designated sites:

The application site is located within and directly adjacent to the Thames Estuary and Marshes Ramsar site and South Thames Estuary and Marshes SSSI. As such, there is potential for direct impacts to habitats and species associated with the designated sites. These potential effects have been assessed in detail within this report.

- Potential for impacts to hydrologically linked habitats:

The site comprises regularly grazed modified grassland and connects to an adjacent watercourse via an on-site ditch which forms part of the Thames Estuary and Marshes Ramsar site and South Thames Estuary and Marshes SSSI. This watercourse links to the Thames and Medway canal and to the wider estuarine system, including the Thames Estuary and Marshes SPA. There is potential for indirect effects through surface water runoff, sedimentation, or pollution during construction and operation. These risks require appropriate mitigation, secured via a Construction Environment Management Plan (Biodiversity).

- Potential for disturbance:

Construction activity has potential to disturb Schedule 1 bird species recorded in the adjacent watercourse corridor, Cetti's warbler and kingfisher, which were noted during the PEA survey (Eco Assistance Ecologists Ltd, May 2025) and other qualifying birds. However, with timing controls and buffer retention of eastern boundary vegetation, effects can be sufficiently managed.

- Low risk of air quality impacts and recreational disturbance:

The Air Quality Assessment (Miller Goodall, May 2025) has confirmed that the proposed development is not expected to result in significant changes in local air quality and therefore

is unlikely to result in significant effects on the designated sites. The site has no public access, nor will there be an increase in dwellings within the area. It can be concluded that recreational disturbance is unlikely to result in significant effects on the designated sites, alone or in-combination with other plans and projects.

- Overall conclusion:

Given the location of the site within and adjacent to internationally designated sites, likely significant effects cannot be ruled out at the screening stage, and an Appropriate Assessment has been undertaken. It is considered that with appropriate mitigation measures, secured within a Construction Environment Management Plan (Biodiversity) via a planning condition, the proposed development is unlikely to result in adverse effects on the integrity of the Thames Estuary and Marshes Ramsar site and SPA, either alone or in combination with other plans and projects.

2.0 Introduction and Purpose

2.1 ACJ *ecology* has assessed the potential impacts of the proposed development at Land at Dalefield Way (East), Gravesend, DA12 2FL, on nearby European and International nature conservation sites. The proposal is for a change of use of the land for open storage (B8 use) primarily for equipment and operations related to Dalefield Way Industrial Park (B8 use) with associated installation of hardstanding/surface treatment, security fencing/gates, access, a soft landscaping mound, and erection of temporary office cabins.

2.2 This report assesses the potential for significant effects arising from the proposed development on International/European Designated Sites.

2.3 The findings are presented within this Shadow Habitats Regulations Assessment (Shadow HRA), providing Gravesham Borough Council, as the Competent Authority, with the necessary information to fulfil its responsibilities under relevant planning policy and legislation, including the Conservation of Habitats and Species Regulations 2017.

2.4 The information contained within this document is intended to ensure that the Competent Authority has all relevant detail required to undertake an informed assessment in accordance with Regulation 63(2) of the Habitats Regulations.

Legislative Context and Scope

2.5 An assessment under Regulation 63 is required because the application site lies within and in

proximity to several International/European Designated Sites, specifically:

- Thames Estuary and Marshes Ramsar site
- Thames Estuary and Marshes SPA

2.6 The site also lies within South Thames Estuary and Marshes SSSI, which is nationally designated and underpins the International/European Designated Sites.

Assessment Methodology and Expertise

2.7 This assessment considers whether the proposed development is likely to result in significant effects on designated sites, either alone or in combination with other plans or projects. It also evaluates whether the proposals would lead to an adverse effect on site integrity.

2.8 The assessment has been undertaken by a suitably qualified and experienced ecological consultant at ACJ *ecology*, who is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Professional judgement has been applied where necessary to interpret available evidence.

Consideration of Avoidance and Mitigation Measures

2.9 In accordance with the judgment of the Court of Justice of the European Union in *People Over Wind and Sweetman v Coillte Teoranta* (Case C-323/17), avoidance and mitigation measures have not been relied upon to exclude likely significant effects at the screening stage of the Habitats Regulations Assessment. Instead, such measures have been considered within the Appropriate Assessment stage when evaluating whether the proposal would result in an adverse effect on the integrity of the European site(s). This approach is consistent with established case law and current Natural England guidance.

2.10 Based on detailed review and assessment, ACJ *ecology* concludes that the proposed development:

- Will not result in any significant adverse effect on the integrity of International/European Designated Sites, either alone or in combination with other plans or projects, provided that appropriate mitigation is secured via a Construction Environment Management Plan (Biodiversity) through a planning condition; and
- Meets the requirements of Regulations 63 of the Conservation of Habitats and Species Regulations 2017.

3.0 Legislative and Policy Framework

Habitats and Birds Directives

3.1 The proximity of the application site to International/European Designated Sites means that the provisions of both the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna

(the Habitats Directive) and the EC Directive on Wild Birds (the Birds Directive) are relevant to this assessment. These Directives are transposed into domestic law through the Conservation of Habitats and Species Regulations 2017 (as amended).

3.2 Under the Habitats Directive (Council Directive 92/43/EEC), Member States are required to take special measures to maintain the distribution and abundance of certain priority habitats and species (listed in Annexes I and II of the Directive). In particular, each Member State is required to designate the most suitable sites as Special Areas of Conservation (SACs). All such SACs form part of the Natura 2000 network under Article 3(1) of the Habitats Directive. Article 2(3) sets out that Member States have a duty, in exercising their obligations under the Habitats Directive, to: “... take account of economic, social and cultural requirements and local characteristics.”

3.3 Under the Birds Directive (Council Directive 2009/147/EC, previously 79/409/EEC), Member States are required to take special measures to conserve the habitats of certain rare species of birds (listed in Annex I of the Directive) and regularly occurring migratory birds. Each Member State is required to classify the most suitable areas of such habitats as Special Protection Areas (SPAs). This is designed to protect wild birds and to provide sufficient diversity of habitats for all species so as to maintain populations at an ecologically sound level. All Birds Directive SPAs also form part of the Natura 2000 network under Article 3(1) of the Habitats Directive.

3.4 There is therefore an obligation under the Habitats Directive and the Birds Directive for Member States to designate sites before turning to measures for their protection. The protection afforded to SPAs and SACs is delivered through Article 6 of the Habitats Directive:

- Article 6(2) requires Member States to take appropriate steps to avoid the deterioration of natural habitats and the disturbance of species for which the sites have been designated.
- Articles 6(3) and 6(4) require that any plan or project not directly connected with or necessary to the management of the site, but likely to have a significant effect upon it, either individually or in combination with other plans or projects, must be subject to an Appropriate Assessment of its implications for the site in view of its Conservation Objectives.

3.5 Having undertaken an Appropriate Assessment, the Competent Authority may agree to a plan or project where it can be concluded that it will not adversely affect the integrity of the site. In light of a negative assessment, Article 6(4) provides that the plan or project may still proceed where it can be demonstrated that there are no alternatives and there are imperative reasons of overriding public interest



as to why it must proceed. In such circumstances, compensatory measures must be put in place to ensure that the overall coherence of the Natura 2000 network is protected.

Conservation of Habitats and Species Regulations 2017

3.6 The Conservation of Habitats and Species Regulations 2017 (as amended), commonly referred to as the Habitats Regulations, transpose the requirements of the Habitats Directive and Birds Directive into UK legislation. Under these Regulations, Competent Authorities have a duty to ensure that all the activities they regulate have no adverse effect on the integrity of any Natura 2000 sites (e.g. SPAs and SACs).

3.7 Regulation 63 sets out the requirements for Competent Authorities:

“63(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for a plan or project, which:– (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects) and (b) is not directly connected with or necessary to the management of the site, must make an appropriate assessment of the implications of the plan or project for that site in view of that site’s conservation objectives.” “63(5) In the light of the conclusions of the assessment, and subject to regulation 64, the authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).”

3.8 Regulation 63 therefore sets out a two-stage process:

1. Determine whether the plan/project is likely to have a significant effect on the European site (HRA Screening).
2. If so, determine whether the plan/project will affect the integrity of the European site (Appropriate Assessment).

Relevant Case Law

3.9 Some key concepts of the Habitats Directive and Habitats Regulations have been clarified through case law. The most pertinent cases in relation to the development proposals are the Waddenzee Judgement, the Sweetman Cases, the Holohan Judgement, the Wealden Judgement and the Dutch Nitrogen Cases.

3.10 Whilst the UK left the European Union on 31 January 2020, EU case law prior to this date continues to be relevant for assessments undertaken pursuant to the Habitats Regulations. However, relevant cases in the EU after this date are not of direct relevance to the UK.



Local Planning Policy

3.11 The Gravesham Local Plan Core Strategy (2014) and saved policies within the Gravesham Local Plan First Review (1994) form the current development plan for the area. These policies are supported by the emerging Gravesham Local Plan, which will replace saved policies once adopted.

3.12 The adopted policy framework includes provisions relating to the protection of biodiversity, ecological networks, and internationally designated sites, with particular regard to European Sites and Ramsar sites forming part of the Thames Estuary System.

3.13 In particular, relevant policies seek to ensure that development proposals:

- Avoid adverse effects on Internationally Designated Sites, including Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and Ramsar sites;
- Protect SSSIs and their supporting habitats;
- Incorporate mitigation measures where potential effects on designated sites or supporting ecological networks are identified.

4.0 Site Context and Designated Features

Application Site Context

4.1 The application site comprises regularly grazed modified grassland and a single willow tree. It is surrounded by Dalefield Industrial Park, residential areas, and the Thames Estuary and Marshes Ramsar site and South Thames Estuary and Marshes SSSI. The site is hydrologically linked to Thames Estuary and Marshes SPA.

Thames Estuary and Marshes Ramsar site/SPA Description

4.2 The Thames Estuary and Marshes Ramsar site and SPA comprises extensive intertidal mudflats and saltmarsh, grazing marsh, and associated coastal and estuarine habitats along the Thames Estuary. These sites form part of a wider estuarine complex which supports internationally important populations of overwintering and breeding waterfowl, alongside diverse assemblages of wetland plants and invertebrates.

4.3 The SPA overlaps spatially with the Ramsar designation, and both are also underpinned by the South Thames Estuary and Marshes SSSI, which provides the national-level designation.

Ramsar Qualifying Features

4.4 The Thames Estuary and Marshes Ramsar site is designated under Ramsar Criteria 2, 5 and 6, reflecting the presence of rare and/or threatened species and internationally important assemblages of



waterfowl, regularly supporting 20,000 or more waterbirds and 1% of the individuals in a population of one species or subspecies of waterbird.

4.5 The site supports internationally important assemblages of overwintering and migratory birds dependent on intertidal and grazing marsh habitats, including species such as:

- Black-tailed godwit (*Limosa limosa islandica*)
- Dunlin (*Calidris alpina alpina*)
- Grey plover (*Pluvialis squatarola*)
- Red knot (*Calidris canutus islandica*)
- Redshank (*Tringa totanus totanus*)
- Ringed plover (*Charadrius hiaticula*)

4.6 The site also supports a diverse population of wetland plants and invertebrates, including species such as:

- Least lettuce (*Lactuca saligna*)
- Hare's-ear (*Bupleurum tenuissimum*)
- Groundbug (*Henestaris halophilus*)
- Damselfly (*Lestes dryas*)

SPA Qualifying Features

4.7 The Thames Estuary and Marshes SPA qualifies under Article 4.1 and 4.2 of the Birds Directive due to the presence of internationally important populations of wild birds.

4.8 Qualifying features include:

- Hen harrier (*Circus cyaneus*)
- Pied avocet (*Recurvirostra avosetta*)
- Black-tailed godwit (*Limosa limosa islandica*)
- Dunlin (*Calidris alpina alpina*)
- Grey plover (*Pluvialis squatarola*)
- Ringed plover (*Charadrius hiaticula*)
- Red knot (*Calidris canutus*)
- Supporting assemblages of waterfowl including redshank (*Tringa totanus*).

4.9 The site regularly supports over 20,000 overwintering waterbirds, meeting the SPA threshold for international importance.

SPA Conservation Objectives

4.10 The Conservation Objectives for the Thames Estuary and Marshes SPA are to ensure that the integrity of the site is maintained and 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.

South Thames Estuary and Marshes SSSI Description

4.11 The South Thames Estuary and Marshes SSSI is a nationally designated site comprising extensive grazing marsh, intertidal mudflats, saltmarsh, seawalls and associated ditch systems along the Thames Estuary.

4.12 The SSSI supports important assemblages of breeding and overwintering birds and forms part of the wider Thames Estuary Ramsar/SPA complex. The site is ecologically important due to its habitat diversity and its function within a connected estuarine landscape supporting nationally and internationally significant bird populations.

SSSI Qualifying Features

4.13 The South Thames Estuary and Marshes SSSI is designated under Section 28 of the Wildlife and Countryside Act 1981 (as amended) for its nationally important mosaic of grazing marsh, saltmarsh, mudflats and shingle habitats and associated scarce plants and bird assemblages.

4.14 Qualifying features include:

- Extensive areas of grazing marsh, mudflats, saltmarsh, dykes and fleets
- Nationally important assemblages of breeding and overwintering wetland birds, with total counts regularly exceeding 20,000.
- Nationally rare invertebrates, such as the scarce emerald damselfly (*Lestes dryas*)

4.15 The SSSI supports key components of the Greater Thames Estuary ecological network and contributes directly to the integrity of the Ramsar and SPA designations.

5.0 Assessment of Likely Significant Effects and Site Integrity

Assessment of Potential Impact Pathways

5.1 The proposed development comprises the change of use of the site to an open storage area, including the introduction of extensive areas of sealed surface, areas of modified and other neutral grassland, and the creation of a native hedgerow along the eastern boundary. The site is located within and directly adjacent to the Thames Estuary and Marshes Ramsar site and South Thames Estuary and Marshes SSSI, with a watercourse forming part of the designated site running immediately adjacent to the eastern boundary.

5.2 Given the proximity and direct hydrological connectivity between the application site and the designated sites, there is potential for impact pathways including:

- Direct habitat loss or modification
- Changes to surface water runoff and water quality during construction and operation
- Disturbance effects, including noise, vibration, and artificial lighting, to qualifying bird species using the adjacent habitats.

5.3 While the scale and nature of the development is relatively limited, the partial overlap between the designated sites and the red line boundary and a direct functional linkage via the adjacent watercourse, which connects to the Thames Estuary and Marshes SPA, means that impact pathways cannot be excluded at this stage.

5.4 In accordance with the precautionary principle set out within the Conservation of Habitats and Species Regulations 2017, it is therefore concluded that likely significant effects on the Thames Estuary and Marshes Ramsar site and SPA, cannot be ruled out, either alone or in-combination with other plans and projects. An Appropriate Assessment is therefore required to consider whether the proposed development would result in an adverse effect on the integrity of the designated site.

Appropriate Assessment

Physical Damage and Hydrological Impacts (Alone and In-Combination)

5.5 The application site comprises predominantly heavily grazed modified grassland. It lies within and directly adjacent to the Thames Estuary and Marshes Ramsar site and the South Thames Estuary and Marshes SSSI, with hydrological linkage to the Thames Estuary and Marshes SPA via the watercourse immediately adjacent to the eastern boundary. As such, there is potential for direct and indirect effects on designated sites through construction and operational activities.



5.6 Given this proximity and partial overlap, there is potential for direct and indirect impact pathways, including:

- Localised habitat loss or degradation of the designated site
- Changes in surface water runoff and hydrological connectivity to the wider area
- Pollution events, such as sediment, dust, fuels and chemicals, entering the adjacent watercourse and wider estuarine system
- Disturbance or degradation of habitats that function as supporting habitats for qualifying species

5.7 The proposed development has been designed to avoid and minimise these risks, particularly through the retention of vegetation along the eastern boundary and the inclusion of a native hedgerow, which will provide a buffer between the development and the designated site. However, this alone does not reduce risks sufficiently to be able to conclude beyond reasonable scientific doubt that the proposal would not adversely affect the integrity of the European sites.

5.8 Therefore, it is recommended that mitigation measures should be secured through a Construction Environment Management Plan (Biodiversity) via a planning condition. This would include a comprehensive set of measures to avoid and reduce potential impacts on nearby designated sites, including:

- Establishment of Biodiversity Protection Zones along the eastern boundary, with protective fencing to prevent encroachment into sensitive habitats, with no development occurring in the designated site. No storage of materials, plant or equipment will occur within these Biodiversity Protection Zones. No ground level changes will be undertaken, nor will any excavation works, trenching, or soil compaction.
- Severe weather protocols and programmed works to avoid the core winter period when birds are most sensitive.
- Retention and protection of boundary vegetation adjacent to the watercourse to maintain habitat connectivity.
- Implementation of dust and silt control measures, including damping down, covering stockpiles, and use of silt fencing to prevent sediment entering the watercourse.
- Designated washing and refuelling areas located away from drainage pathways.



- Measures to control surface water runoff and prevent uncontrolled discharge into the watercourse.
- Pollution prevention measures, including:
 - Storage of fuels and chemicals on impermeable surfaces away from sensitive receptors
 - Provision of spill kits and emergency response procedures
 - Restriction and careful management of works within proximity to the watercourse

5.9 These measures are considered sufficient to avoid direct impacts to the designated sites, to ensure the water quality and hydrology of the adjacent watercourse and wider Ramsar/SPA/SSSI system are maintained, and the function of the watercourse supporting qualifying and protected species is preserved.

5.10 When considered alone and in-combination with other plans and projects, the implementation of these secured mitigation measures reduces identified impact pathways such that no adverse effect on site integrity would arise.

5.11 It can be concluded that the proposed development will not result in adverse effects on the integrity of the designated sites, provided mitigation measures are appropriately secured, in relation to physical damage or hydrological impacts.

Disturbance – Noise, Lighting, Vibration and Visual (Alone and In-Combination)

5.12 The proposed development has the potential to generate disturbance to qualifying bird species associated with the Thames Estuary and Marshes Ramsar site and SPA, and the South Thames Estuary and Marshes SSSI, through noise, artificial lighting, vibration and visual disturbance during both construction and operation. Disturbance can affect sensitive species such as the avocet (*Recurvirostra avosetta*) and hen harrier (*Circus cyaneus*), particularly where it results in displacement from supporting habitats or interruption of foraging, roosting or commuting behaviour.

5.13 During construction, activities such as site clearance, groundworks, and vehicle movements may generate intermittent noise and vibration. However, these effects will be temporary and localised. The Activity Noise Assessment (Syntegra Consulting Ltd, October 2025) demonstrates that predicted operational noise levels would not exceed existing ambient noise levels at nearby receptors, with baseline noise already influenced by road traffic and industrial activity. The assessment concludes that noise generated by the development would not result in adverse impacts on nearby receptors. This provides a robust indication that noise effects on adjacent habitats and



qualifying bird species are likely to be limited.

5.14 Artificial lighting during construction and operation has the potential to disturb nocturnal and crepuscular species, particularly through light spill into adjacent habitats used for foraging and commuting. Increased illumination can disrupt natural behaviours and habitat use. However, these effects can be minimised through the use of directional, low-spill lighting directed away from boundary habitats. Lighting will only be used when necessary and operated for the minimum duration required.

5.15 Visual disturbance is also an important pathway, particularly for Ramsar and SPA qualifying bird species which are sensitive to human presence and movement. Visual stimuli such as people, vehicles, and general activity can trigger flight responses in overwintering birds, resulting in increased energy expenditure and reduced feeding. Evidence indicates that even relatively low levels of disturbance (e.g. approximately seven walkers per day) can reduce bird territory densities up to 500m from disturbance sources (Holm & Laursen, 2009). Repeated disturbance events may lead to displacement from suitable habitat, with potential implication for breeding success.

5.16 In this context, the proposed development may introduce new visual stimuli through construction activity, operational use of the site, and associated vehicle movements. However, the scale of the development is limited, and this site is located within an existing urban/industrial setting where baseline disturbance levels are already elevated. Furthermore, the retention of boundary vegetation and planting of a native hedgerow along the eastern boundary of the site will help maintain a visual buffer between the development and adjacent habitats.

5.17 To further reduce potential disturbance effects, mitigation measures should be secured through a Construction Environment Management Plan (Biodiversity) via a planning condition. These may include:

- Scheduling noisy activities to daytime hours
- Implementation of a Sensitive Lighting Strategy to reduce light spill
- Retention of vegetation buffers and the use of screening during construction
- Good site practices to limit unnecessary movement and disturbance near sensitive habitats

5.18 When considered in-combination with other plans and projects within the Zone of Influence (Zoi) of the Ramsar site/SPA, there is potential for cumulative disturbance in relation to increased human activity. However, given the relatively small scale of the proposal, the existing baseline of

disturbance, and the securing of mitigation measures via a planning condition, these effects are not expected to undermine the conservation objectives of the designated sites.

5.19 Therefore, it is concluded that, subject to appropriate mitigation measures, the proposed development will not result in adverse effects on the integrity of the Thames Estuary and Marshes Ramsar site and SPA, or the South Thames Estuary and Marshes SSSI.

Air Quality Effects (Alone and In-Combination)

5.20 Potential air quality effects on the qualifying features of the Thames Estuary and Marshes Ramsar site and SPA, and the South Thames Estuary and Marshes SSSI, may arise during both the construction and operational phases of the proposed development. The primary pollutants of relevance include nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), and dust deposition arising from construction activities.

5.21 During construction, there is potential for dust generation from earthworks, vehicle movements, and material handling. However, the Air Quality Assessment (Miller Goodall Ltd, May 2025) identifies construction dust impacts as not significant following implementation of standard mitigation measures. Given the temporary nature of the works, significant effects on designated habitats are not anticipated.

5.22 Operationally, the development comprises B8 open storage use and does not introduce new emission sources or industrial processes. The Air Quality Assessment confirms the scheme will not result in a net increase in vehicle movements associated with the wider industrial site. As such, no material change in NO₂ or particulate concentrations is expected.

5.23 Given the scale and nature of the development, and the absence of a predicted increase in traffic or emissions, impacts on designated ecological receptors are considered negligible. When considered in-combination with other plans and projects, no significant cumulative air quality effects are anticipated, with note that the background air quality levels are well below relevant objectives.

5.24 Overall, it is concluded that the proposed development will not result in adverse effects on air quality that could affect the integrity of the designated sites, either alone or in-combination.

Recreational Disturbance Effects (Alone and In-Combination)

5.25 The proposed development is for open storage use and will not generate significant increases in recreational pressure or public access to the Thames Estuary and Marshes Ramsar site or SPA, or the South Thames Estuary and Marshes SSSI.

5.26 No new public access routes, greenspace, or residential development is proposed that would increase visitor numbers to the designated sites.

5.27 In-combination effects with other developments have been considered. Given the absence of any increase in recreational use arising from this development, there is no mechanism by which the proposal would contribute to cumulative recreational disturbance impacts on the designated sites.

5.28 In conclusion, no recreational disturbance effects are anticipated either alone or in-combination.

Assessment Method for Determining Effects on Site Integrity

5.29 Judgements on whether the integrity of European sites are likely to be adversely affected are made with reference to:

- The qualifying features for which the sites are designated
- The Conservation Objectives for those features
- The definition of site integrity as set out in the Habitats Regulations.

5.30 In accordance with the precautionary principle established through the Waddenzee judgement (Case C-127/02), conclusions regarding effects on site integrity are only reached where it can be demonstrated beyond reasonable scientific doubt that the proposal would not adversely affect the integrity of the European sites.

5.31 The assessment has therefore been undertaken on a precautionary basis, considering all potential impact pathways (alone and in-combination) and applying avoidance and mitigation measures where appropriate. Where residual uncertainty remains, this has been addressed through conservative assumptions consistent with established ecological guidance and case law.

5.32 The assessment approach follows the principles set out in Natural England guidance on determining site integrity (English Nature, 2004), structured around consideration of whether the proposal would:

- Maintain the extent and structure of qualifying habitats
- Avoid direct impacts on qualifying species populations
- Avoid indirect impacts through habitat loss or functional degradation
- Avoid changes to supporting ecological processes
- Avoid interruption of physical, chemical or biological processes underpinning site integrity

6.0 Summary and Conclusions

6.1 The assessment has considered all potential impact pathways arising from the proposed development, including physical loss, habitat degradation, disturbance effects, and indirect impacts on supporting ecological processes. These have been assessed alone and in-combination with other plans and projects where relevant.

6.2 Avoidance and mitigation measures should be secured via a Construction Environment Management Plan (Biodiversity), including those relating to operational controls and site management.

6.3 On this basis, it is concluded that the proposed development would not result in any adverse effects on the integrity of the Thames Estuary and Marshes Ramsar site and SPA, either alone or in combination with other plans or projects. It is also concluded that the proposed development would not result in any adverse effects on the South Thames Estuary and Marshes SSSI.

6.4 Accordingly, and subject to the implementation of the identified avoidance and mitigation measures via a planning condition, the Competent Authority can conclude that the proposal is compliant with the requirements of the Habitat Regulations.