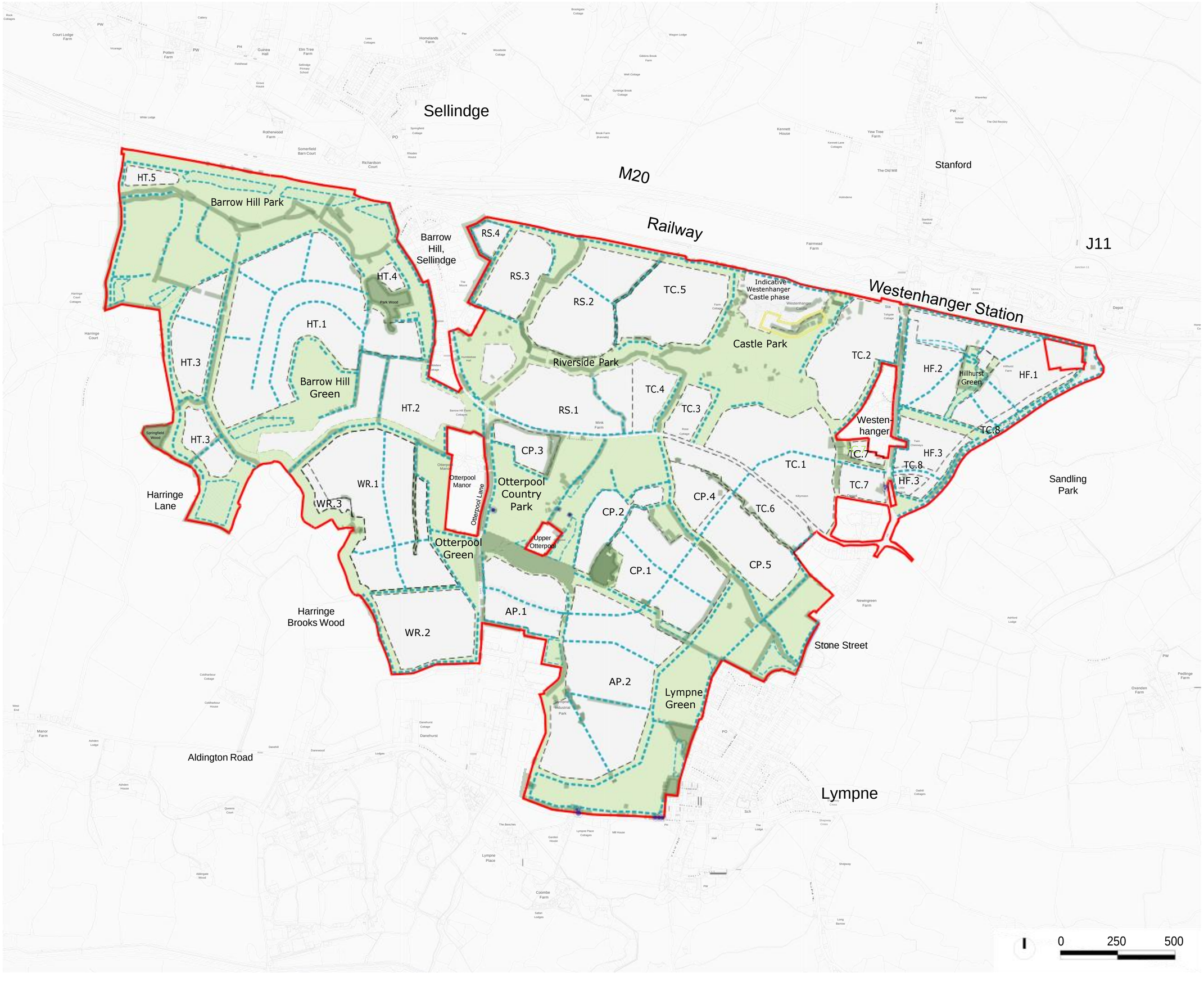


Existing

Existing woodlands, trees, treebelts and hedgerows retained.
This Parameter Plan shows where vegetation is proposed to be retained. Breaks in this retained vegetation may however be required to facilitate the proposed development. This will be confirmed at the Tier 2 and Tier 3 stages once detailed tree and vegetation surveys have been conducted and the design has been further progressed.

Area in front of Westenhanger Castle with vegetation to be removed subject to further survey and Conservation Management Plan

Existing trees with TPO retained

Proposed

Proposed development areas

n.n Numbered key to reflect development areas in illustrative phasing plan

Proposed indicative Westenhanger Castle phase

The indicative Westenhanger Castle phase relates to an area of development will be the subject of future consideration/approval

Proposed areas of structural planting

Proposed rows of structural planting

Structural planting must be provided in the general location indicated on this Parameter Plan. The precise location and type of structural planting is to be defined at Tier 2. To inform the Tier 2 structural planting proposals see the Green Infrastructure Strategy for details regarding planting type, location and the necessary advance planting required.

Proposed open space

Application Red Line Boundary

OTTERPOOL PARK
COUNTRYSIDE • CONNECTED • CREATIVE

Client:
Otterpool Park LLP

Masterplanner:
FARRELLS

Project:
Otterpool Park

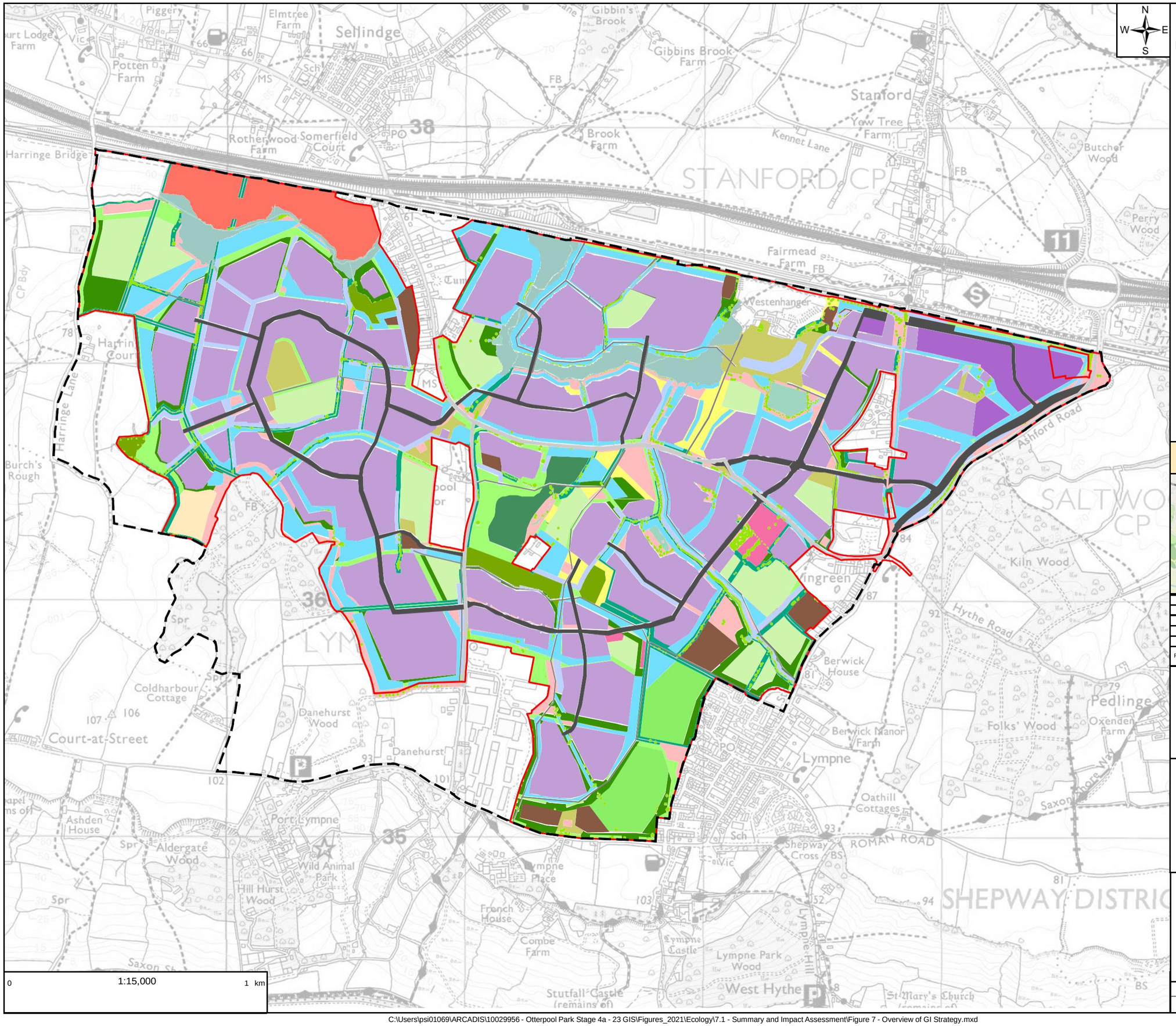
Drawing:
Open Space & Vegetation

Scale:
1:7,500 @ A1, 1:15,000 @A3

Status:
For Approval

Drawing No. OPM(P)4002_rev YY

Figure 7.7: Green infrastructure strategy



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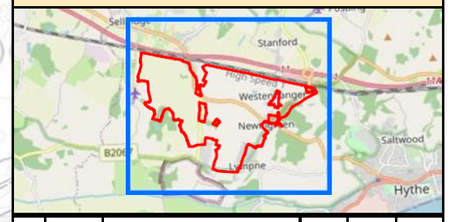

REV	Date	Description	Drawn	Check	Approv
02	03-03-2022	FOR INFORMATION	PS	BM	MG
01	23-11-2018	FOR INFORMATION	PN	BM	MG

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London
EC3M 4BY

OTTERPOOL PARK
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Figure 7.7
Overview of GI Strategy

scale	original size	datum	grid
1:15,000	A3	Sx	BNG

C:\Users\psi01069\ARCADIS\10029956 - Otterpool Park Stage 4a - 23 GIS\Figures_2021\Ecology\7.1 - Summary and Impact Assessment\Figure 7 - Overview of GI Strategy.mxd

Arcadis (UK) Limited

80Fen

80 Fenchurch Street

London

T: +44 (0) 20 7812 2000

arcadis.com

Appendix C – Email conversation with Natural England outlining the scope of the recreation surveys

[redacted]

[redacted]

Broadly speaking, I agree with your proposed approach in terms of visitor survey questionnaire methodology, and that you intend to visit Folkestone to Etchinghill Escarpment Special Area of Conservation (SAC), but focus on collating existing data available on visitor pressure at Dungeness SAC/ Special Protection Area (SPA)/ Ramsar site. This makes sense for the latter given the considerable work undertaken at Dungeness in support of Shepway and Rother District Councils' Local Plans.

Having spoken with some of my colleagues who are Responsible Officers for nearby designated sites, and K[redacted] Kent Downs Area of Outstanding Natural Beauty (AONB), I would like to suggest the following sites which you may want to consider including in your scope:

- Wye and Crundale Downs SAC – this site is likely to be a draw for visitors particularly to the National Nature Reserve. The car park you suggest would be an ideal location capturing most visitors here.
- Dover to Kingsdown Cliffs SAC – this site already suffers from trampling from recreational pressure, which the National Trust is trying to manage. Although this site is approx 20km away from the proposed Otterpool Park site, it should be given consideration in the Habitats Regulations Assessment; I would suggest contacting the National Trust to see if they have any data available on visitor usage, eg how far visitors appear to travel to visit the site.
- Farthing Common car park – this site is not within any European site but is a prominent location along the North Downs Way National Trail on the escarpment – I am mentioning it here in case your visitor survey data may also contribute towards the Landscape and Visual Impact Assessment, in terms of assessing how well used the National Trail is; in which case you may also want to conduct surveys at this well used location on the scarp.

I hope you find this useful and I am happy to talk further. I hope the surveys go well.

With thanks,

[redacted]

www.gov.uk/natural-england

[redacted]

[redacted]

Thank you so much for your voicemail message, I think both you and I have been on leave and have kept missing each other. We decided to postpone the surveys for a couple of weeks until we had had final confirmation from you, for which I am very glad – it sounds as though your meeting with [redacted] from the AONB next Monday could be extremely useful! If, as you suggest, you were able to discuss our proposed survey locations with her and either confirm their acceptability / identify others which may be better, then that would be great.

I note your suggestion to include the Wye and Crundale Downs SAC in the surveys, and I am sure that we can include that, given that we can approach Dungeness in a slightly different way. I note from the MAGIC website that there is a car park just to the north of the SAC and a section of the North Downs Way leading south from it through the SAC, which I think would be an opportune location to place surveyors.

I have copied [redacted] in on this email as he is organising the survey team for me, and will be identifying new dates shortly for which the team are available. As I will be on leave after this week, if you could copy [redacted] in on any emails including information from your discussions with [redacted] that would be great and he can feed it into the survey methodology.

I'm around tomorrow if you wanted a further chat, but I think we have it covered now!

[redacted]

[redacted]

ARCADIS Design & Consultancy for natural and built assets

Be green, leave it on the screen.

Appendix D – Results tables from the recreation surveys

Otterpool Park Recreational Pressure Surveys

1.0 Introduction

The Conservation of Habitats and Species Regulations 2017 implement the Habitats Directive (92/43/EEC) in England and Wales, which requires the assessment of plans and projects for their potential to affect sites of European nature conservation importance (including Special Areas of Conservation and Special Protection Areas). As part of the proposed creation of the new garden settlement at Otterpool Park, and in consultation with Natural England, there is a requirement to assess recreational pressure on nearby protected environmental areas, notably the Folkestone to Etchinghill Escarpment Special Area of Conservation (SAC), the Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA) and Wye and Crundale Downs (SAC). These sites have been identified through consultation with Natural England as being potentially vulnerable to increases in recreational pressure. The following sections contain data tables obtained from visitor surveys in relation to the Folkestone to Etchinghill Escarpment and Wye and Crundale Downs SAC.

2.0 Methodology

Visitor surveys were undertaken at locations within the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC, taking place over the course of four days – two consecutive weekdays (30th/31st August 2017) and a weekend (23rd/24th September 2017). Survey locations and methodology were agreed following discussion with representatives from Natural England and the Kent Downs Area of Outstanding Natural Beauty (AONB). An email from Natural England dated 31/07/17 states that:

'Broadly speaking, I agree with your proposed approach in terms of visitor survey questionnaire methodology, and that you intend to visit Folkestone to Etchinghill Escarpment Special Area of Conservation (SAC)….. Having spoken with some of my colleagues who are Responsible Officers for nearby designated sites, and [redacted] *at the Kent Downs Area of Outstanding Natural Beauty (AONB), I would like to suggest the following sites which you may want to consider including in your scope:*

- *Wye and Crundale Downs SAC – this site is likely to be a draw for visitors particularly to the National Nature Reserve. The car park you suggest would be an ideal location capturing most visitors here.'*

For the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC, we proposed to engage with a representative sample of visitors and undertake face to face interviews. The specific objectives of the survey were to gain an indicative idea of visitor numbers, explore characteristics of visitor trips and the distances people travel to the site.

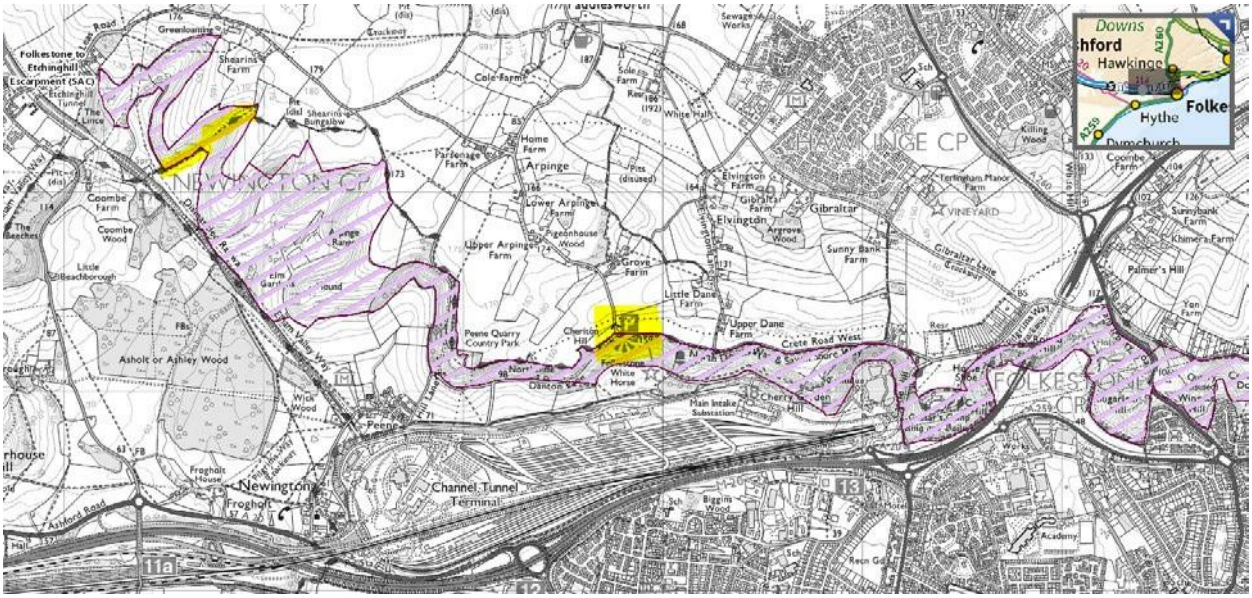
Each survey day included early morning (7am – 9am) and early evening (5pm – 7pm) visitor counts and interviews (where visitors may be more likely to be local residents) as well as periods during the day (proposed to be 10am – 12pm and 2pm – 4pm). Surveyors were situated at specific locations within the SAC and undertook counts of visitor numbers within specific time periods as well as interviews with visitors. Over the four days, a total of 164 surveys were recorded.

3.0 Data Tables

Location 1 – Folkestone to Etchinghill Escarpment

The Folkestone to Etchinghill Escarpment is an extensive area (over 180 hectares) of chalk grassland located to the north of Folkestone in Kent. The site is designated as a SAC for its dry grasslands and scrublands on chalk or limestone, including important orchid sites (the site is home to three nationally rare plants). The escarpment is bisected by the A20, however it remains one of the largest remaining areas of unimproved chalk downland in Kent.

Two starting points (highlighted below) were selected at the Folkestone to Etchinghill Escarpement, one in the north of the survey area just outside Etchinghill and the other along North Downs Way overlooking the Channel Tunnel. These were chosen as suitable and safe areas to park the car before commencing with the surveys. For this location, the group of four surveyors were split into two pairs (pair at each point) to ensure all areas of the SAC were covered to capture all users.



Survey Date 1 (Thursday 31st August 2017) – the weather conditions on Survey Date 1 were a mixture of sunshine and showers. In total, there were eight surveys recorded.

Survey Date 2 (Saturday 23rd September 2017) - the weather conditions on Survey Date 2 were mainly dry and overcast. In total, there were 88 surveys recorded.

1. Are you on holiday to the area or is today's visit part of a day trip?

	Thursday 31st August					Saturday 23rd September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Holiday					0	1				1
Day Trip		3	4	1	8	14	24	24	17	78
Live Locally					0		4	2	2	8

2. If visit is part of a day trip, ask for home postcode?

	Thursday 31st August					Saturday 23rd September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
CT15 7DF		1			1					
Hawkinge			1		1					
Whitfield			1		1					
Maidstone			1		1					
CT19 4JY						1				1
Sandgate						1		1		2
Etchinghill						2		1	1	4
Folkestone						1		4	1	7
Lyminge						1				1
Hythe						1	1			2
Hawkinge						1		3	4	8
Folkestone						2	9	4	4	19
Canterbury						1				1
Ashford							2		1	3
Etherington Lane							1			1

Sittingbourne							1			1
CT18 8DA							1			1
Cheriton							2	1		3
CT19							3	1		4
Cherington							1			1
CT18 8BD							1			1
CT18								1	1	2
Ostend, Belgium								1		1
CT19 5AT								1		1
Peene								2		2
Christchurch, Dorset								1		1
CT18 8AY								1		1
Dymchurch TN29 0NN								1		1
CT20								1		1
Newington								2		2
CT20 3RA									1	1
CT6 8BZ									1	1
CT18 8AN									1	1
Dover									1	1
London									1	1

3.How often do you visit the site?

	Thursday 31st August					**Saturday 23rd September**				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Most days			1		1	8	15	7	8	38
About once a week		1			1	3	9	7	5	24
At least once a month					0	3	3	(Visited whilst going to George's Barn and Railway Museum 8	3	17
Once every 2 or 3 months		2	3		5		3	4		7
Less frequently				1	1			1	3	4

4. How did you travel here today (tick main form of transport)?

	Thursday 31st August					**Saturday 23rd September**				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Private vehicle (Car/van/minibus)			3		3	8	17	18	12	55
Public transport (bus/train)					0			2		2
Walk		3	1	1	5	6	7	7	6	26
Motorcycle					0					0

Bicycle					0		3	2		5

5. What is the main purpose of your visit today?

	Thursday 31st August					Saturday 23rd September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Walking		2	3	1	6	4	5	10	6	25
Dog Walking			1	1	2	8	17	11	10	46
Mountain biking/cycling					0		3			3
Exercise (e.g running/jogging)		1	1		2	3	4	2	4	13
Nature/birdwatching			1		1			2		2
Photography			1		1					0
Other					0		Kite Flying Runners who parked their car at the bottom of the hill. Bootcamp training meet up a group to train. Paraglidin g	Rambler s Group Blueberr y picking Picnic Chill and enjoy the view Not well signpost ed Day out for the children	Enjoying family day out Enjoying the view	

6. How long have you spent or do you intend to spend here today in total?

	Thursday 31st August					Saturday 23rd September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Up to 1 hour					0	5	16	17	12	50
A couple of hours		2	2	1	5	9	14	7	4	34
Half a day			2		2	1		3(1 Full day)	3(1 Full day)	7
Don't know					0					0

7. Why have you chosen this site over others?

	Thursday 31st August					Saturday 23rd September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Close to where I live		1	2		3	9	20	20	11	60
Variety of tracks and paths		3	3		6	7	16	11	8	42
Quality of landscape/scenery		2	3	1	3	11	16	15	12	54
Wildlife offer					0	2	1	-	2	5
Other (write below)			View and fresh air		0	Number of different running		Quiet and interesting Peaceful Beautiful		

						routes and steep inclines. Boys enjoy it		View Sheer edges – wind direction Scenic		

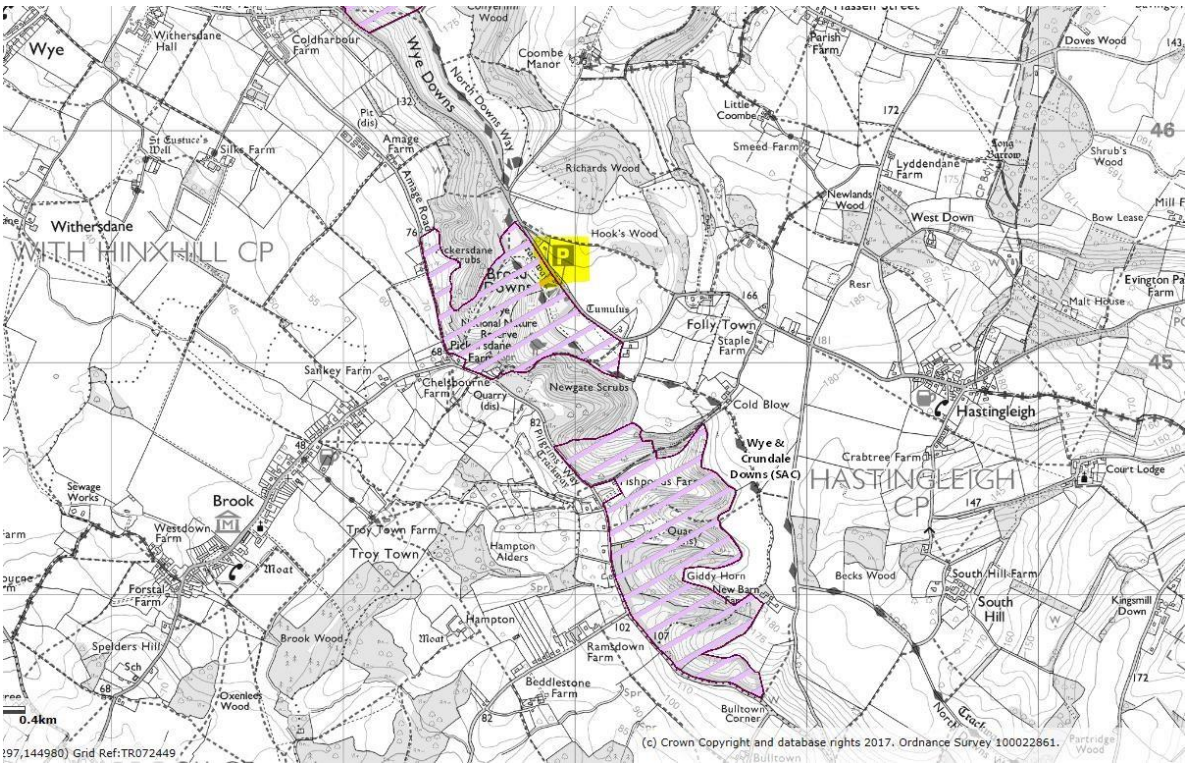
8. Including yourself, how many people are with you during your visit here?

	Thursday 31st August					Saturday 23rd September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Number of 0-18 year olds					0		3	15	2	20
Number of 19-25 year olds		1			1	9	11	6	9	35
Number of 26-59 year olds		1	4	1	6	15	31	72	18	136
Number of 60+ year olds		1	1		2	3	6	13	2	24

Location 2 – Wye and Crundale Downs

The Wye and Crundale Downs SAC is an extensive area of approximately 110 hectares of chalk grassland located between Wye and Hastingleigh. The site qualifies as a SAC due to the semi-natural dry grasslands and scrubland facies such as dry grasslands and scrublands on chalk or limestone, including important orchid sites. The Downs sit in between the M20 and A28 to the north of Ashford (southern edge of the North Downs).

The selected starting point(highlighted below) at the Wye and Crundale Downs was chosen as a suitable and safe area to park the car before commencing with the surveys.



Survey Date 1 – Wednesday 30th August – the weather conditions on Survey Date 1 were windy for the majority of the day within the survey times. Only three surveys were recorded.

Survey Date 2 – Sunday 24th September - the weather conditions on Survey Date 2 were dry and sunny for the majority of the day within the survey times. In total, there were 65 surveys recorded.

1. Are you on holiday to the area or is today's visit part of a day trip?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Holiday		1			1		1			1
Day Trip		1	1		2	5	14	30	15	64
Live Locally					0		1	1		2

2. If visit is part of a day trip, ask for home postcode?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00 - 9.00**	**10.00 - 12.00**	**14.00 - 16.00**	**17.00 - 19.00**	**Total**	**7.00 - 9.00**	**10.00 - 12.00**	**14.00 - 16.00**	**17.00 - 19.00**	**Total**
Bromley		1			1					
Canterbury			1		1					
Folkestone								1		1
Canterbury						1		1	4	6
Ashford						1	2	10	5	18
Dover									1	1
Not given						1		1	1	2
Sellindge						1				1
Brook/Wye						1				1
Fishponds Farm							1			1
Wye							5	8	2	15
CF4 5SB							1			1
Chilton/Westwell							1			1
Kingswood							1			1
BN21 1UF							1			1
Brook							2	1		3
Tunbridge Wells								1		1
Lydden								1		1
Elham								1		1
Maidstone								1		1
Boughton								1		1
Waltham							1	1		2
Holland								1		1
Sevenoaks								1		1
Westbourne								1		1
Hastings								1		1
Gravesend									1	1
Bilsington									1	1
Crundale							1			1

3. How often do you visit the site?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Most days					0	1	3	3	2	9
About once a week					0	2	6	7	1	16
At least once a month					0	2	3	3	1	9
Once every 2 or 3 months			1		1		3	6	5	14
Less frequently		1			1		2	13	6	21

4. How did you travel here today (tick main form of transport)?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Private vehicle (Car/van/minibus)		1	1		2	4	11	26	14	55
Public transport (bus/train)					0		1 (Train to Canterbury then North Downs Way)	1		2
Walk					0	1	5	5	1	12
Motorcycle					0					0
Bicycle					0					0

5. What is the main purpose of your visit today?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Walking		1	1		2	4	5	22	13	44
Dog Walking					0	1	9	9	2	22
Mountain biking/cycling					0					0
Exercise (e.g running/jogging)					0		2			2
Nature/birdwatching					0		2			2
Photography					0		1			1
Other					0		Opportunity to get out of the house			
							Looking at different species, good for my health and wellbeing.			

6. How long have you spent or do you intend to spend here today in total?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Up to 1 hour			1		1		10	13	5	28
A couple of hours		1			1	5	6	14	4	29
Half a day					0			5	2	7
Don't know					0					0
							1			1

7. Why have you chosen this site over others?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Close to where I live					0	3	11	13	5	32
Variety of tracks and paths		1			1	5	5	9	2	21
Quality of landscape/scenery			1		1	5	13	16	5	39
Wildlife offer					0	1		1		2
Other (write below)					0		Nice walk	Recreational		
							Quiet and secure			
							Views			
							The site is one of the reasons they moved to this location.	Views		
								Nice pubs in the area.		
								Have not visited the area in a while but wanted to make the most of the weather.		
								Change from the beach and convenient.		
								Meet up with friends		
								Wanted to go for a nice walk and this is the perfect location		
								Fresh air		

								On my way home		

8. Including yourself, how many people are with you during your visit here?

	Wednesday 30th August					Sunday 24th September				
Time	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**	**7.00-9.00**	**10.00-12.00**	**14.00-16.00**	**17.00-19.00**	**Total**
Number of 0-18 year olds					0		5	3	3	11
Number of 19-25 year olds					0	1	6	20	6	33
Number of 26-59 year olds		3	2		5	5	15	39	8	67
Number of 60+ year olds		12			12	1	6	13	8	28

Appendix E – Updated Information to Inform HRA

OTTERPOOL PARK

Environmental Statement Appendix 7.19 Information to inform Habitats Regulations Assessment – Stage 1 and Stage 2 ~~(for Stodmarsh SPA, SAC and Ramsar Site)~~

Version ~~2.1~~3.0 – Updated in response to Recreation, Air Quality and Nutrient Neutrality Comments and Natural England Feedback in 2023

~~NOVEMBER 2022~~

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Executive Summary

Arcadis Consulting (UK) Limited has been commissioned on behalf of Otterpool Park LLP to ~~undertake~~provide information necessary to inform a Habitats Regulations Assessment in relation to 'Otterpool Park', a proposed garden settlement located within Folkestone, Kent hereafter, referred to as "the site". This will enable the competent authority (Folkestone and Hythe District council) to perform their statutory duties relating to the Habitats Regulations.

To support the proposed Development, an Environmental Impact Assessment (EIA) was undertaken and the findings presented in the Otterpool Park Environmental Statement (ES) to which this updated Appendix relates. The EIA has been undertaken to ensure the likely significant effects of the proposed Development are properly understood by the decision maker. In tandem with the production of an EIA, an HRA is required in accordance with the Habitats Regulations. The HRA assesses whether the proposed Development is likely to have a significant effect on any National Site Network (and Ramsar) Sites or on any of their qualifying features, either directly or indirectly, alone or in combination with other plans/projects. This document provides information to support an HRA that would be completed by the competent authority i.e. the local planning authority.

This report supports an amended outline planning application for the Otterpool Park development. Information to support an HRA was previously provided to support the original application for outline planning permission made in February 2019, and comments were received in relation to that document from stakeholders. These comments have been addressed within this amended assessment. The following are the key differences between the ~~initial and~~2019and amended application:

- In the ~~initial~~2019 HRA, some sites within 30km were not screened as no potential impact pathways were identified. Within this amended submission, all sites within 30km (18 sites) are screened to make the rationale of this HRA clearer.
- Within the ~~initial~~2019 HRA, water nutrient impacts were not a vulnerability identified. Subsequently, impacts to the Stodmarsh Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site from increases in water nutrients have been identified as a potential impact pathway by Natural England. As such, this has been addressed within this HRA.
- The Institute of Air Quality Management's (IAQM) designated sites guidance (2020) identifies that for impacts on sites that are within the National Site Network, the assessor should first consider whether the air quality issues have been considered in the Local Plan HRA. Additionally, it identifies that if this has been done then it is appropriate and in line with government guidance to defer to that over-arching Local Plan assessment. Deferring 'upwards' to the Local Plan also addresses the undesirable situation of having multiple traffic and air quality models for a single local authority area and the potential for the modelling inconsistencies that would follow. As such, within ~~this~~the original HRA, assessments of Air Quality impacts are recommended to be deferred to the Local Plan HRA (LUC 2018 and 2019). This approach was consulted upon with Natural England, ~~full details are presented in Chapter 6 Air Quality, Section 6.2 under the sub heading *Deferring to the Local Plan HRA for ecological sites with a European designation*, with the relevant consultation with~~but no steer was provided. Subsequently, Natural England ~~Presented in ES Appendix 7.2~~stated that it was not considered appropriate to defer to the local plan. In this HRA an approach that was discussed with Natural England is employed.
- Within the ~~initial~~2019 HRA, all impacts were screened out at Stage 1. Within this document, impacts resulting from the nutrient neutrality have potential to impact the Stodmarsh SAC, SPA and Ramsar site unless on-site mitigation is implemented. As such, in line with the case law set out by CJEU C-323/17 People Over Wind and Peter Sweetman vs Coillte

Teoranta, impacts to this site are assessed through ~~appropriate assessment.~~Appropriate Assessment.

Subsequent to the March 2022 issue of the HRA, comments from stakeholders including Natural England and the Local Planning Authority have been received. In response to these comments, the following amendments have been made to this document:

- Additional information on the approach to air quality (namely and approach to assessing nitrogen deposition resulting from ammonia) has been added to justify the assessment approach and outline the regimen that the competent authority could secure to provide practical and legal surety.
- An updated assessment and approach to addressing nutrient neutrality in line with comments and a modified methodology is provided;
- Additional information on the assessment of the potential impact from recreational pressure.

Discussions in early 2023 with the LPA and Natural England also prompted some additional changes in this document, including assessing some sites and impact pathways at Appropriate Assessment stage.

Within this document, a list of sites within the National Site Network with the potential to be impacted by the proposed Development was drawn up and included 18 sites up to 30km from the proposed Development.

The potential impacts of the proposed Development were largely determined by three key factors:

- whether there were any sites or qualifying features that could be directly affected by the proposed Development;
- whether there are any sufficiently mobile qualifying features of the sites that while distant from the scheme may rely on functional habitat that would be affected by the proposed Development (largely birds and bats – see section 6 on functional habitat); and
- whether any of the potential effects of the proposed Development have the potential to indirectly affect receptors some distance from the scheme due to the zone of influence (for example through effects on water regime or increased traffic flow).

Professional judgement has been used in this assessment, taking into account the conservation objectives for sites within the National Site Network, to determine whether or not significant effects are likely to result from the proposals.

Only those potential effects with relevance to the proposed Development and the qualifying features of the sites within the National Site Network have been scoped in for further consideration.

The following potential effects were considered:

- Functionally linked land: changes in favourable condition of faunal species populations as a result of habitat loss/degradation/disturbance of functionally linked land.
- Air pollution: impact of atmospheric nitrogen deposition – as a result of the increase in dust and vehicular emissions during construction/operation.
- Public access/disturbance – as a result of the increase in recreational pressure in the operational phase.
- Water pollution – changes in water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater, via water treatment works, and drainage to watercourses or ditches within the Stour catchment.

Functionally Linked Land

Birds were the only sufficiently mobile receptor to have the potential to use habitat functionally linked to the proposed Development site; these were screened out as no qualifying bird features were being

supported or maintained by the site from the bird survey results, nor does the proposed Development support habitat that would be likely to support the qualifying features in any significant numbers.

Air Pollution

Only one site was within the threshold for air quality assessment, that being the Folkestone to Etchinghill Escarpment SAC. In line with the Institute of Air Quality Management's designated sites guidance (2020), ~~this~~the 2019 HRA ~~defers~~deferred to the Local Plan HRA (Folkestone and Hythe District Council (F&HDC) Core Strategy Review (LUC, 2018) and the F&HDC Places and Policies Local Plan (PPLP) (LUC, 2018) and Core Strategy Review HRA Addendum (LUC 2019)), concluding no significant effects predicted for the proposed Development. These documents underpin the 2020 People and Places Local Plan Review.

Subsequent consultation with Natural England raised queries in relation to ~~ammonia~~nitrogen deposition from the emission of ammonia from road ~~contributions.~~traffic sources; however it was agreed with NE that assessment of nitrogen deposition inclusive of ammonia could be assessed at subsequent tiers. Considering that the national forecasts of projected ~~ammonia~~nitrogen deposition ~~is~~(inclusive of ammonia from road traffic) are lower than the current baseline in future 'business as usual' scenarios, the site ~~is currently in favourable~~ has a 'maintain' conservation objective indicative of a favourable status ~~and that there is an acceptance of the large uncertainty of projecting air quality trends over long periods of time~~, it is considered that air quality impacts upon this site will not have a significant impact upon the ~~designated~~integrity of the site (utilising the information within the Local Plan HRA and the air quality modelling compiled for the ES). ~~However, in order to provide further certainty, it is recommended that the potential impact from nitrogen deposition is screened at a subsequent stage of the tiered planning process, and that updated air quality assessments are conducted utilising the emerging ammonia modelling tools and updated DEFRA toolkits as they are issued. In the unlikely event that these studies should identify nitrogen exceedances, a suite of mitigation and management options are available.~~

~~A number of the sites were of particular stakeholder concern due to a~~ However, following extensive consultation, it was agreed that information for an Appropriate Assessment would be prepared at this stage, in order to provide further certainty. It is recommended that the potential ~~increase in recreational pressure; primary~~impact from nitrogen deposition (including ammonia) is rescreened, and ~~secondary data was analysed for these sites. These sites were~~ if required, also progressed to Appropriate Assessment at a subsequent stage of the tiered planning process.

This will ensure that the latest evidence is utilised in the air quality assessments including modelling tools, such as the updated DEFRA toolkits (which would incorporate future policy, such as the Transport Decarbonsation Plan[1]) as they are issued.

Based upon the assessment in the ES (excluding modelling of road traffic ammonia at this tier) in the modelled scenario, the projected change in nitrogen deposition (do something vs do minimum) is >1% of the lower critical load (LCL) at six modelled points within the bounds of the SAC next to the A20 and the southern portals of the Roundhill Tunnel in the 2044 scenario. As such, the impacts from air quality on Folkestone to Etchinghill Escarpment SAC~~, the Wye and Crundale Downs SAC,~~ have been progressed to Stage 2 Appropriate Assessment in this report.

When assessed in this Appropriate Assessment, it is concluded that all of the points which exceed 1% of the LCL are within road verges around a tunnel portal (not habitats listed on the designation of the site). The current air quality modelling when assessed at Appropriate Assessment shows that

[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1009448/decarbonising-transport-a-better-greener-britain.pdf

there is no pathway for the designated site to be impacted. Therefore, the project is considered not have an adverse effect on the integrity of the SAC and can be granted permission at Tier 1. This does not remove the requirement to rescreen the air quality impacts at subsequent tiers, the requirement to do this is recommended to be secured by an appropriate planning condition.

This HRA provides the rationale behind the view that there is unlikely to be an impact on site integrity even if ammonia from road traffic is included in the modelling. This does not negate the requirement to demonstrate this through subsequent assessment stages.

It is recommended that the project can be approved at Tier 1 following this Appropriate Assessment, with additional screening at subsequent tiers.

Public Access / Disturbance

At screening stage, sites were reviewed in relation to their vulnerability to recreational pressure, distance from the proposed Development, existing visitor information (for example distance travelled, visitor behaviour) that could be obtained, and stakeholder concerns identified. The majority of sites were screened out from further assessment due to a variety of factors, including distance from the proposed Development (noting that evidence from other survey work shows that 75% of visitors to sites are generally from within a 4km radius); the fact that sites were not publicly accessible or had no vulnerability to recreational pressure identified; or that existing visitor management practices were in existence and therefore a small increase in visitor numbers was not likely to lead to a significant effect. Four of the sites screened out for further assessment – the three sites associated with the Dungeness Complex and the Dover to Kingsdown Cliffs SAC – had been highlighted by NE as being at potential risk from increases in visitor numbers; further review of data at screening stage enabled these sites to be screened out. With regard to the Dungeness complex (SPA, SAC and Ramsar) (nearest points, coastal 8.7km south, and marine 2.9km south), the Dungeness Complex Sustainable Access and Recreation Management Strategy (SARMS) and supporting documents (The Places Team, 2017) was reviewed and it was concluded that no significant effect resulting from the development is foreseen. This is supported by Natural England's responses to the previous Otterpool Park HRA submission.~~and the Dungeness complex (SPA, SAC and Ramsar).~~ It should be noted that the SARMS is required in relation to the local plan for Folkestone and Hythe District Council and is therefore not mitigation relating directly to this HRA.

Two further sites were highlighted by NE as of particular concern, namely Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC. Following an initial review at screening stage, both these sites were taken forward for Appropriate Assessment. While small numbers of additional visitors may be expected, visitor behaviour predicted that the proposed Development's residents were unlikely to travel to these sites in any significant numbers and the primary recreational use was dog walking. Given the large amount of accessible greenspace integral to the design (over 50% of the site), it is anticipated that a significant proportion of residents would utilise this space for dog walking and visits to the designated sites would be in small numbers for recreational purposes associated with the appreciation of the designated features. As a result it was concluded that there were no adverse effects on the integrity of the SACs resulting from the proposals.

~~With regard to the Dungeness complex (SPA, SAC and Ramsar) (nearest points, coastal 8.7km south, and marine 2.9km south), the Dungeness Complex Sustainable Access and Recreation Management Strategy (SARMS) and supporting documents (The Places Team, 2017) was reviewed and it was concluded that no significant effect resulting from the development is foreseen. This is supported by Natural England's responses to the previous Otterpool Park HRA submission.~~

~~Of the remaining sites under consideration, Parkgate Down SAC is not publicly accessible. The remaining sites are over 15km away, with seven of them being over 20km away. Residents of the proposed Development are unlikely to use these sites in any significant numbers.~~

In summary, proposals ~~are~~will not ~~likely to~~ have ~~a significant~~an adverse effect on the site integrity of the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC through

recreational pressure. The conclusions have been informed both by baseline evidence, notably visitor surveys undertaken at these sites, together with changing behaviours in relation to open space and the needs of the population. For example, the HRA describes the changing ways in which people interact with the outdoors since the Covid-19 pandemic, in addition to the different needs that people have – whether this be for dog walking, exercising, or being 'in nature'. People experience outdoor spaces for a variety of purposes, future residents of the proposed Development are likely to visit different types of spaces to fulfil different needs, quality greenspaces in proximity to their homes are likely to be preferentially used. Therefore, areas such as the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC form just one type of space amongst many.

Other factors that have informed the conclusions include the distance of the sites from the proposed Development~~. The conclusions that no likely significant effects are anticipated is founded on these factors, together with~~ and the multiplicity of alternative outdoor spaces that are provided either as part of the proposed Development or in its vicinity. ~~The requirement for the preparation of an access strategy serves as a further measure by which these areas can be monitored and protected.~~Good practice measures to monitor and thereby help manage the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC include the preparation of an Access Strategy for the proposed Development. Further engagement with Natural England about the content of the access strategy would be welcomed at a later stage in the design, for example when further detail is available at Tier 2~~.~~ ; i.e. in line with ~~Natural England's~~NE's recommendation "*that the Otterpool Park application revisits the potential for recreational impacts at the detailed design stage*".

Water Quality

~~A review of the Local Plan HRAs, namely the F&HDC Core Strategy Review (LUC, 2018) and the F&HDC Places and Policies Local Plan (PPLP) (LUC, 2018) and Core Strategy Review HRA Addendum (LUC 2019), was carried out to assess other plans and projects which could lead to likely significant effects on sites within the National Site Network when considered in combination with the proposed Development. It concluded that there were no likely significant effects, there are no additional developments of note since this assessment that in combination with the proposed Development would change this assessment in regard to functionally linked habitat, air pollution and recreation.~~

The proposed Development was found to have the potential to lead to likely significant effects (alone and in combination) upon the habitats and qualifying features of the Stodmarsh SAC, SPA and Ramsar sites with regard to water pollution. This is with specific reference to increased nutrient inputs, primarily associated with future wastewater treatment requirements and discharges from wastewater treatment works into the East Stour River, which in turn connects with the designated sites. Natural England have advised that all new development within the Stour catchment that has the potential to result in increased nutrient budgets requires mitigation in order to achieve nutrient neutrality. This requirement has also been confirmed by project-specific nutrient budget calculations undertaken as part of this assessment. Therefore, with regard to water quality impacts associated with the proposed Development and Stodmarsh SAC, SPA and Ramsar sites, Stage 2 Appropriate Assessment is required.

The Appropriate Assessment of potential impacts upon Stodmarsh SPA, SAC and Ramsar Site, was informed by the Water Cycle Study (WCS) (available within the Otterpool Park Environmental Statement, Appendix 15.2). Extensive consultation was undertaken with stakeholders including Natural England. The approach to water management on site will ensure that the development is nutrient neutral.

Since the previous HRA submission (March 2022), changes in methodology and consultee comments have resulted in the need for modifications to the approach to achieving nutrient neutrality (outlined in the WCS). The updated approach, outlined in a Nutrient Budget provided as a component of this assessment, demonstrates that nutrient neutrality can be achieved on the site~~.~~ and there is no risk of an adverse effect upon the integrity of the SAC. As such, no impact upon Stodmarsh is

foreseen and therefore there is no need to proceed beyond Stage 2 of the HRA. As the site will be nutrient neutral (compared to the baseline), there is no potential for in-combination effects, therefore no assessment in relation to other proposals and water quality is required.

With regard to all other potential impacts and designated sites, the HRA is complete at Stage 1, and no further input in this respect in relation to the proposed Development is required.

In-combination Effects

A review of the Local Plan HRAs, namely the F&HDC Core Strategy Review (LUC, 2018) and the F&HDC Places and Policies Local Plan (PPLP) (LUC, 2018) and Core Strategy Review HRA Addendum (LUC 2019), was carried out to assess other plans and projects which could lead to likely significant effects on sites within the National Site Network when considered in combination with the proposed Development. It concluded that there were no likely significant effects, there are no additional developments of note since this assessment that in combination with the proposed Development would change this assessment in regard to functionally linked habitat, air pollution and recreation. As the site can achieve nutrient neutrality, there is no risk of in-combination effects resulting from changes to water quality.

Summary

The summary of the above information and what was screened and progressed to Appropriate Assessment is shown below in Table 1.

Table 1: Summary of key impact pathways and results of Screening and Appropriate Assessment

Impact Pathway	Summary of Screening (Stage 1)	Summary of Appropriate Assessment (Stage 2)
Functionally linked land: changes in favourable condition of faunal species populations as a result of habitat loss/degradation/disturbance of functionally linked land.	The results of the bird surveys, combined with the distance of the site from relevant designated sites and the habitats on the project site results in impacts to international designated sites relating to functionally linked land being screened out.	N/A
Air pollution: impact of atmospheric nitrogen deposition – as a result of the increase in dust and vehicular emissions during construction/operation.	Initially, it was proposed that the assessment be deferred to the local plan in line with IAQM guidance. Subsequent liaison with Natural England suggested that ammonia should be considered, however it was agreed that this reassessment to include ammonia could be provided at later tiers. To provide sufficient surety at this tier, the modelling (excluding ammonia) of impacts to international designated sites was reviewed, and impacts to Folkestone to Etchinghill Escarpment was identified as being potentially impacted. As a result impacts to this site from air quality changes were progressed to Appropriate Assessment.	The current air quality modelling when assessed at Appropriate Assessment shows that there is no pathway for the designated site to be impacted. Measures are outlined to ensure that this is reassessed at subsequent tiers (including ammonia in the assessment). Rationale is also provided to demonstrate that there is currently no significant impact pathway even if ammonia is included in the modelling and no way that the development can be allowed to proceed whilst causing unidentified impacts to the SAC. Mitigation is outlined that could be applied at subsequent tiers in the unlikely event that it is required. It is recommended that the project can be approved at Tier 1 following the Appropriate Assessment.
Public access/disturbance – as a result of the increase in recreational pressure in the operational phase.	Due to the distance of the sites from Otterpool, the results of the visitor surveys and the green infrastructure present within the proposed development (embedded in the design) the potential significant effects are screened out at Stage 1 for the majority of sites. Two sites are progressed to Appropriate Assessment.	Assessment of two sites is taken to Appropriate Assessment – Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC. Once the variety of recreational opportunities that are provided on site at Otterpool Park together with existing management practices at the sites and the results of the recreational surveys relating to visitor behaviour are considered it is concluded that there are no adverse effects on site integrity.
Water pollution – changes in water quality, specifically increased nutrient	Impacts upon Stodmarsh SAC are screened in. As mitigation is required on site to achieve nutrient	Measures to achieve nutrient neutrality to be secured in the design are outlined, including on

inputs (nitrogen and phosphorous) through wastewater, via water treatment works, and drainage to watercourses or ditches within the Stour catchment.	neutrality, the assessment of impact proceeded to the Appropriate Assessment stage.	site wastewater treatment. There is no adverse effect on the integrity of the SAC from approval at this tier. Measures to secure details of the nutrient neutrality approach at subsequent tiers are outlined (i.e. through planning conditions). It is recommended that the project can be approved at Tier 1 following the Appropriate Assessment.

1 Introduction

1.1 Overview

1.1.1 Arcadis Consulting (UK) ~~Limited was~~limited has been commissioned ~~by~~on behalf of Otterpool Park LLP ~~('the applicant')~~ to provide information ~~in support of~~ necessary to inform a Habitats Regulations Assessment ~~(HRA) for a proposed new development. The proposed Development is~~in relation to 'Otterpool Park', a proposed garden settlement located within Folkestone, Kent~~.~~ hereafter, referred to as "the site". This will enable the competent authority (Folkestone and Hythe District council) to perform their statutory duties relating to the Habitats Regulations.

1.1.2 To support this proposed Development, an Environmental Impact Assessment (EIA), presented in an Environmental Statement (ES) has been undertaken to ensure the likely significant effects of the proposed Development are properly understood by the decision maker. In tandem with the production of an EIA, an HRA is required in accordance with the Habitats Regulations. The HRA assesses whether the proposed Development is likely to have a significant effect on any National Site Network (and Ramsar) sites hereafter referred to as "the sites" or on any of their qualifying features, either directly or indirectly, alone or in combination with other plans/projects. This document provides information to support the HRA, the final HRA will be undertaken by the local planning authority as the competent authority, for ease this report is referred to as 'the HRA' throughout.

1.2 Site Location and Setting

1.2.1 The site is located within Folkestone, Kent within the administrative boundary of Folkestone and Hythe District Council (F&HDC) and spans a large area located immediately south of Junction 11 of the M20. The site is largely agricultural in nature with the majority of the site comprising arable and pasture fields, a disused horseracing course with an artificial lake ('Folkestone Racecourse Lake'), areas modified from historical use (airfields), existing historic settlements and relatively new industrial areas.

1.2.2 The M20 motorway, Channel Tunnel Rail Link and Westenhanger Station are located to the north of the site, beyond which lie the villages of Stanford and Postling within a largely rural setting including the Kent Downs Area of Outstanding Natural Beauty (AONB). This AONB extends to the east, beyond which lies the town of Hythe, and to the south where it includes Lympne village. The site also includes the settlements of Barrowhill, Sellindge, Westenhanger and Newingreen. Lympne Industrial Park and some areas of woodland are located immediately south of the site. In addition,

East Stour River flows through the site in a north-east to west direction. The site is centred on Ordnance Survey National Grid Reference TR 111 363.

1.2.3 An aerial image illustrating the Outline Planning Application (OPA) is presented in Image 1.

Image 1: Outline Planning Application boundary (red line)

1.3 Proposed Development

1.3.1 The proposed Development is located on approximately 589 ha of land. The planning application seeks permission for a new garden settlement accommodating up to 8,500 homes (Use Classes C2 and C3) and Use Class E, F, B2, C1, Sui Generis development, including use of retained buildings as identified, with related infrastructure, highway works, green and blue infrastructure, with access, appearance, landscaping, layout and scale matters to be reserved.

1.4 Aims of the Assessment

1.4.1 This document aims to:

- outline the legal requirements and guidance for undertaking an HRA, including the potential option stages;
- describe the baseline features of the sites in the National Sites Network and assess how the proposed Development site may be used by their qualifying features;
- describe the Development proposals;
- assess the likelihood of the significant effects of the proposed Development on Sites in the National Sites Network as identified in consultation with Natural England (NE);
- review relevant literature for the Special Protection Area (SPA) bird species to assess the likelihood (or otherwise) of significant effects from the proposed Development; and
- confirm the result of the HRA in accordance with NE's advice.

2 Background to Habitats Regulations Assessment

2.1.1 This section describes the background behind National Site Network designations and the legislation surrounding its protection and therefore the rationale for this assessment. This also includes references to guidance followed.

2.2 Natura 2000 Site Creation

2.2.1 In May 1992, Member States belonging to the European Union (EU) adopted legislation designed to protect the most seriously threatened habitats and species across Europe. This legislation is referred to as the Habitats Directive and complements the Birds Directive (adopted in 1979). At the heart of both these Directives was the creation of a network of sites called Natura 2000. Natura 2000 comprised a network of areas designated to conserve natural habitats and species that are rare, endangered, vulnerable or endemic within the EU.

2.2.2 The Birds Directive requires the establishment of SPAs for birds classified under Directive 2009/147/EC on the Conservation of Wild Birds (the codified version of Directive 79/409/EEC as amended[2]) for rare, vulnerable and regularly-occurring migratory bird species and internationally important wetlands.

2.2.3 The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora)[3], similarly requires Special Areas of Conservation (SACs) to be designated for other species, and for habitats.

2.2.4 Together, SPAs and SACs made up the Natura 2000 series. All EU Member States contributed to the network of sites in a Europe-wide partnership.

2.2.5 SPAs are classified under the Birds Directive to help protect and manage areas which are important for rare and vulnerable birds because they use them for breeding, feeding, wintering or migration.

2.2.6 The Directive was enacted in UK legislation by the Conservation of Habitats and Species Regulations, more commonly referred to as the Habitats Regulations. The 2017 Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The amendments have resulted in the UK designated sites that were part of the European Natura 2000 site network now being termed as National Site Network sites.

2.2.7 The Conservation of Habitats and Species Regulations 2017 (Amendment) (EU Exit) Regulations 2019 retain in place the prescriptions of the 2017 Regulations with only relatively minor changes. The HRA regime set out in the Conservation of Habitats and Species Regulations 2017 (as amended) therefore continue to apply.

2.3 National Site Network Site Protection

2.3.1 Although implemented in England through The Conservation of Habitats and Species Regulations 2017 (Amendment) (EU Exit) Regulations 2019, the source directive that led to the creation of this legislation is the European Community (EC) Habitats Directive.

2.3.2 Under Article 6 of the European Community (EC) Habitats Directive an assessment is required where a plan or project may give rise to significant effects upon a National Site Network site or sites (also known as ‘Sites in the National Sites Network’).

2.3.3 In addition, it is a matter of law that candidate SACs (cSACs) and Sites of Community Importance (SCI) are considered in this process; furthermore, it is Government policy that sites

[2] Conservation of Wild Birds (the codified version of Directive 79/409/EEC as amended

[3] Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

designated under the 1971 Ramsar Convention for their internationally important wetlands (Ramsar sites) and potential SPAs (pSPAs) are also considered. These are all hereafter referred to as Sites in the National Sites Network.

2.3.4 Paragraph 3, Article 6 of the Habitats Directive states that:

2.3.5 '*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to ~~appropriate assessment~~Appropriate Assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to paragraph 4 (see below), the competent national authority shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.'*

2.3.6 Paragraph 4, Article 6 of the Habitats Directive states that:

> *'If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures to ensure that the overall coherence of the national site network is protected. It shall inform the Commission of the compensatory measures adopted.'*

2.3.7 As explained above, the requirements of the Habitats Directive are transposed into UK law by means of the Conservation of Habitats and Species Regulations 2017 (as amended), hereafter referred to as the Habitats Regulations. The process of assessing the implications of development on Sites in the National Sites Network (which include Ramsar sites) is therefore known as HRA. The 2017 Regulations have been amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The effect of the amendments largely relates to wording, requirements and processes remain the same as protection levels remain unchanged. Existing EU guidance and case law from the European Court of Justice remains a valid source of direction and interpretation of the requirements of the legislation, although it should be noted that much case law has now been incorporated into guidance and/or best practice.

3 Habitats Regulations Assessment Method

3.1 Overview

3.1.1 The requirements of the HRA comprise four distinct stages and according to prescribed guidance and methods. A flow chart deriving from the European Commission guidance (2001) is presented in Image 2. This report comprises the Stage 1: Screening and Stage 2: Appropriate Assessment (in relation to the Stodmarsh SPA SAC and Ramsar Site only).

3.2 Stage 1: Screening

3.2.1 This is the process which initially identifies the likely impacts upon a National Sites Network Site (formerly European Site) of the project or plan, either alone or in combination with other projects or plans and considers whether these impacts may be significant. If the effect may be significant, or is not known, that may trigger the need for an Appropriate Assessment (Stage 2).

3.3 Stage 2: Appropriate Assessment

3.3.1 This is the detailed consideration of the impact on the integrity of the National Sites Network Site (formerly European Site) of the proposed Development, either alone or in combination with other projects or plans, with respect to the site's conservation objectives and its structure and function. This is to determine whether or not there will be adverse effects on the integrity of the site. This stage also includes the development of any additional mitigation measures to avoid or reduce any possible significant adverse effects. Where there are adverse effects, an assessment of mitigation options is carried out to determine adverse effects on the integrity of the site. If these mitigation options cannot avoid adverse effects, then development consent can only be given if Stages 3 and 4 are followed.

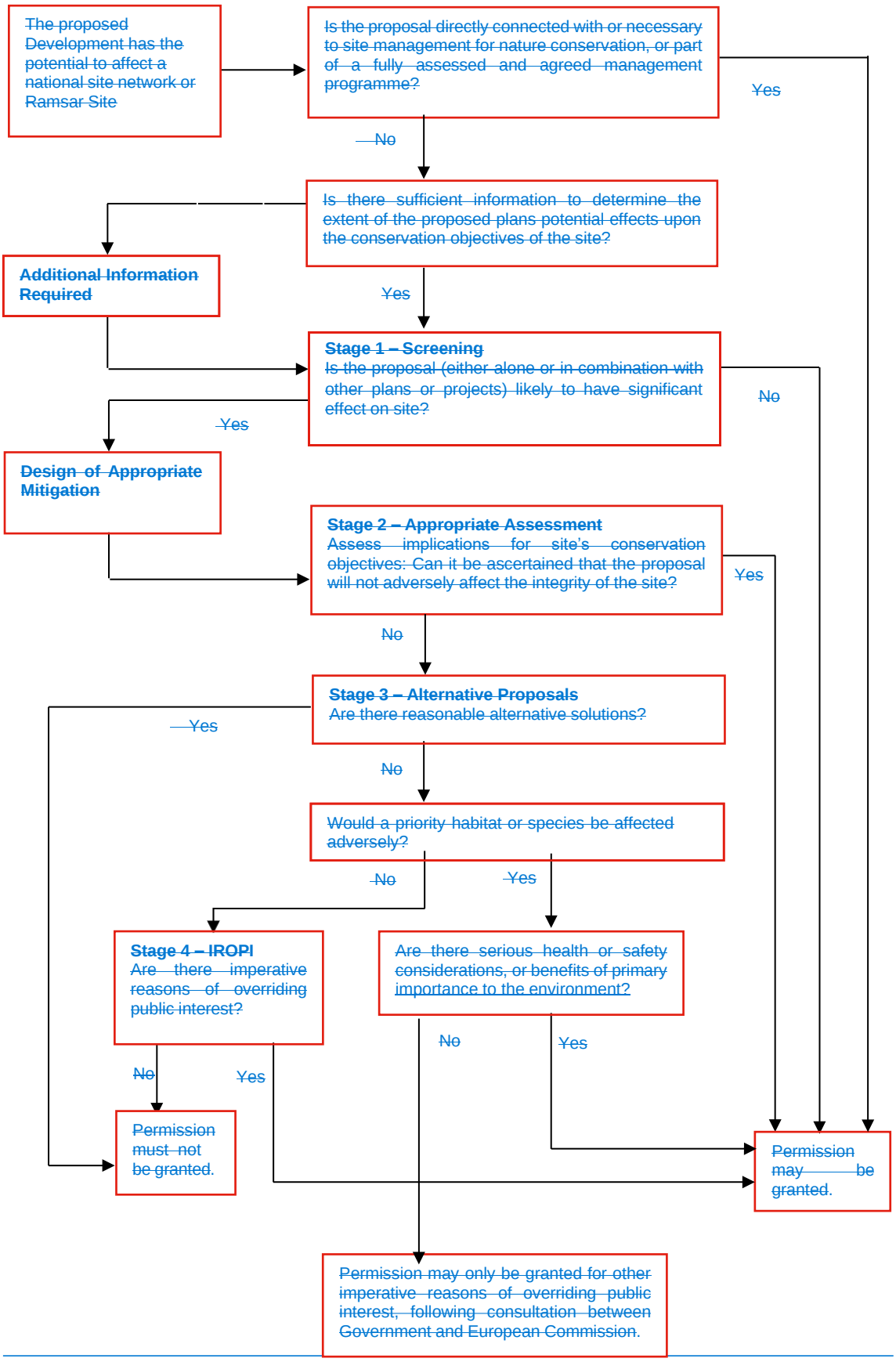
3.4 Stage 3: Assessment of Alternative Solutions

3.4.1 This is the process which examines alternative ways of achieving the objectives of the proposed Development that would avoid adverse effects on the integrity of the National Sites Network Site (formerly European Site), should avoidance or mitigation measures associated with the proposed Development be unable to cancel out adverse effects.

3.5 Stage 4: Assessment Where No Alternative Solutions Exist and Where Adverse Effects Remain

3.5.1 Should no alternative solutions be available, at Stage 4 an assessment is made with regard to whether or not the development is necessary for imperative reasons of overriding public interest

(IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the national site network.


The proposed Development has the potential to affect a national site network or Ramsar Site
Is the proposal directly connected with or necessary to site management for nature conservation, or part of a fully assessed and agreed management programme?
Yes
No
Is there sufficient information to determine the extent of the proposed plans potential effects upon the conservation objectives of the site?
Additional Information Required
Yes
Stage 1 – Screening
Is the proposal (either alone or in combination with other plans or projects) likely to have significant effect on site?
No
Yes
Design of Appropriate Mitigation
Stage 2 – Appropriate Assessment
Assess implications for site's conservation objectives: Can it be ascertained that the proposal will not adversely affect the integrity of the site?
Yes
No
Stage 3 – Alternative Proposals
Are there reasonable alternative solutions?
Yes
No
Would a priority habitat or species be affected adversely?
No
Yes
Stage 4 – IROPI
Are there imperative reasons of overriding public interest?
Are there serious health or safety considerations, or benefits of primary importance to the environment?
No
Yes
No
Yes
Permission must not be granted.
Permission may be granted.
Permission may only be granted for other imperative reasons of overriding public interest, following consultation between Government and European Commission.

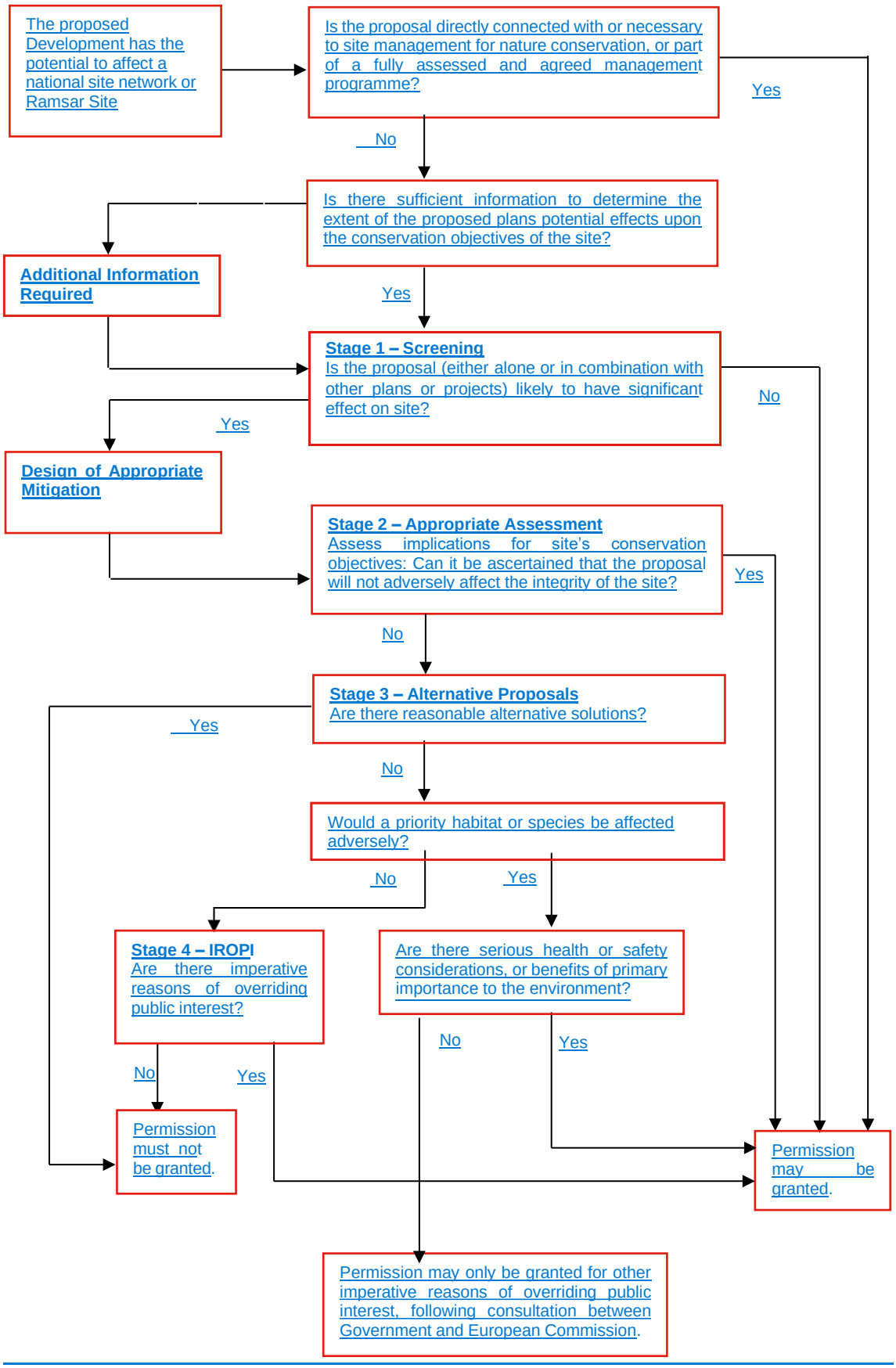


Image 2: HRA Flow diagram

3.6 Relevant Legislation and Guidance

3.6.1 The following legislation and guidance documents will be consulted in the preparation of theHRA:

- The Conservation of Habitats and Species Regulations 2017 (as amended);
- European Commission (2000), Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC;
- European Commission (2007), Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC;
- European Commission (2001), Assessment of plans and projects significantly affecting Natura 2000 sites;
- The Planning Inspectorate Habitat Regulations Assessment Advice Note Ten: Habitat Regulations Assessment relevant to nationally significant infrastructure projects, Version 5, August 2013;
- The Highway Agency (HA) Interim Advice Note 141/11: Assessment of Implications (of Highways and/or Roads Projects) on Sites in the National Sites Network (Including Appropriate Assessment) and the Planning Act 2008;
- The Design Manual for Roads and Bridges (DMRB) Volume 11 Environmental Assessment, Section 4 Other Assessment Techniques, Part 1, HD44/09, Assessment of Implications (of Highways and/or Roads Projects) on Sites in the National Sites Network (Including Appropriate Assessment), Section 4 Assessment Methods (adopted in February 2009);
- Natural England (2020) Advice on Nutrient Neutrality for New Development in the Stour Catchment in Relation to Stodmarsh Designated Sites - For Local Planning Authorities;
- High Court judgment of Wyatt, R. (On the Application of) v Fareham Borough Council (2021) EWHC 1434 (Admin) (28 May 2021);Court of Justice of the European Union (April 2018); Case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta (‘People over Wind’).

3.7 HRA Consultation ~~– (Stage 1 of the HRA Process)~~

3.7.1 The aim of this consultation with NE was to seek agreement of the scope of the overall HRA Stage 1 Assessment. The table below (Table 2Table 2) presents the consultation with Natural England in relation to this HRA.

Table 2: NE HRA consultation

Consultee	Date / Attendees	Summary of Issues Raised/Agreed
Natural England (NE)	**7 December 2016** meeting, attendees included: Landscape and Visual Lead (Arcadis) Natural England (NE) representative Ecology Lead (Arcadis)	An initial meeting was undertaken between Arcadis Landscape and Biodiversity team members. During this meeting key issues were discussed, including potential impacts to Natura 2000 and Ramsar sites henceforth referred to as Sites in the National Sites Network. This consultation was formalised by NE in a letter dated 15/12/2016 Reference DAS/11529/202390 (Appendix B).

Consultee	Date / Attendees	Summary of Issues Raised/Agreed
NE	**31 July 2017** Via email: • NE representative Arcadis	This email conversation was to agree the scope of the surveys required for the recreational surveys. This included six sites of particular stakeholder concern. This is presented in Appendix D.
NE	**25 May 2018** via telephone Attendees: • NE representative • Ecology Lead (Arcadis)	The conversation was to discuss the scoping letter (May 2018) Arcadis had produced to formally scope the content of the HRA with NE (Appendix C). • Approach and initial thoughts outlined in the HRA scoping letter by Arcadis confirmed. • Also recommended using the information from the HRA undertaken for the Shepway Core Strategy and the Shepway Places and Policies Plan to be used within our assessment and the need for assessment of in combination effects. • NE requested that the consultation between Arcadis and herself regarding the recreational pressure surveys be reported within the HRA. • Suggested that air quality monitoring of the Folkestone to Etchinghill Escarpment SAC may be required after the project.
NE (Lead Advisor, Sussex & Kent)	March 2021	NE were contacted regarding the approach to assessment of air quality impacts on Sites in the National Sites Network (Folkestone to Etchinghill SAC) with regards to deferring to the findings of the Local Plan HRA. NE acknowledged receipt of the initial query. No response has been received at the time of writing, therefore it has been assumed that the proposed approach is agreed.
NE	June 2021, follow up email July 2021	NE were contacted by email in order to confirm the approach to comments received relating to the assessment of recreational disturbance in the HRA. The email contained a summary of the proposed approach. No response has been received at the time of writing and it has therefore been assumed that the proposed approach is agreed.
NE	August 2022	Comments on the application including the HRA were received These comments are presented as Appendix M.
NE via the Local Planning Authority	09 September 2022	Further clarification from Natural England on the approach to Ammonia deposition (presented as Appendix N).
FHDC (as LPA) prepared by AECOM	11 November 2022	Feedback was received from FHDC outlining that it was not necessary to screen out the impacts from ammonia related deposition at Tier 1 HRA. Requests were also made to include further rationale for the selection of tools utilised to inform the nitrogen deposition assessment. Provided as Appendix R
NE, LPA	01/02/2023 – Teams call	Further consultation with Natural England detailed further information requested, relating to landscape, nutrient neutrality, air quality and recreational pressure. Each issue was addressed on the call with a route

Consultee	Date / Attendees	Summary of Issues Raised/Agreed
		to resolution identified, including updates to the HRA and commitments to planning conditions to secure detail at subsequent future stages..

3.8 HRA Consultation on Nutrient Neutrality In Relation To Stodmarsh SPA, SAC and Ramsar Site ~~(HRA Stage 2)~~

3.8.1 The potential for nutrient loads within the East Stour River catchment to adversely impact upon the Stodmarsh SAC, SPA and Ramsar site was not raised by stakeholders in relation to the 2019 HRA submission. Subsequently, Natural England identified this potential impact, and raised this with Folkestone and Hythe District Council (F&HDC). As a response, it was identified that Otterpool Park would require measures in place to achieve nutrient neutrality in relation to the East Stour River catchment.

This section outlines the consultation conducted in relation to the potential water pollution form nutrient loading at the Stodmarsh SAC, SPA and Ramsar Site. The following stakeholder liaison was undertaken in relation to this issue, as presented in Table 2.

Table 3: Consultation in relation to nutrient neutrality on the Otterpool site

Date	Description	Details
29/06/2020	Nutrient Neutrality Roundtable meeting	Roundtable meeting with NE (Natural England) and F&HDC – Folkestone and Hythe District Council (including their HRA consultants) to discuss Nutrient Neutrality assessment needs to overcome NE's Stodmarsh Lake concerns
14/10/2020	Flood Risk and Water Management Workshop – Technical Workshop 2	Workshop with F&HDC (Folkestone and Hythe District Council), EA (Environment Agency), NE (Natural England) and KCC (Kent County council, the Lead Local Flood Authority LLFA) to discuss baseline hydraulic modelling, nutrient neutrality mitigation strategy, East Stour River bridge crossings design approach and integrated water management.
31/03/2021	Cross-boundary nutrient neutrality mitigation opportunity discussion	Meeting with Ashford Borough Council to discuss if Otterpool Park can help offering nutrient neutrality mitigation credits to deliver development sites in Ashford.
16/03/2022	Advice for Water Quality and Nutrient Neutrality issued to F&HDC. This new methodology incorporates the updated information as detailed below as well as a catchment specific (Stodmarsh) nutrient budget calculator	This update required a new calculation of the nutrient budget.
July 2022	Updated nutrient budget provided to Local Planning Authority (LPA) and NE for their initial feedback and consultation.	This document contained the following modifications: • The Generic Methodology includes the latest version of Farmscoper (version 5) which includes more up to date values for the various variables. The updated

Date	Description	Details
		approach also uses the actual outputs rather than averaged values from Farmscoper for detailed farm types broken down by rainfall, soil drainage type and Nitrate Vulnerable Zones (NVZ). The benefit of taking the detailed farm types approach is that it offers a more specific budget calculation for the actual nutrient losses from the development or mitigation land to be taken into account. • The Generic Methodology covers all potential different situations on water usage that might occur across the full range of catchments. • It provides a more consistent approach for dealing with onsite wastewater treatment systems. • Pet waste is not considered in the greenspace export coefficient as this type of waste is taken into account in the urban surface water run off element of the calculator. • The new methodology uses a different approach for calculating the urban export co-efficient so that it is applicable across the country. The values take into account the type of urban land and development site specific rainfall. This results in export values that will be specific to the rainfall at the location within the catchment.
15/~~09202~~09/2022	LPA comments prepared by AECOM on behalf of Folkestone and Hythe District council are received. N.B. At the time of reporting no comments form Natural England have been received on the updated submission.	Comments are presented with the project response in the table below (*~~Table 4~~Table 4* Table 5).
14/12/2022	AECOM letter (advising the LPA) regarding the approach to deferring ammonia assessment to subsequent Tiers of the planning process	AECOM advised that based upon the consultation with Natural England they agreed that: *" it is not necessary to undertake further modelling at this stage"* It was also advised that the additional information provided in Appendix Q was not considered necessary, as it was not required to screen at this stage, however, this conflicted with comment from Natural England and Otterpool LLP lawyers, therefore this is left in for information purposes in this HRA.
14/10/2022	Natural England Comments on the updated July 2022 Nutrient Neutrality calculations.	Comments are outlined with the project response in the table below (Table 4).

3.8.2 In line with the Statement of Common Ground, the Appropriate Assessment within this report as supported by the Water Cycle Analysis (ES Appendix 15.2), Nutrient Budget Analysis (Appendix L) and statement of common ground (Appendix J) addresses the requirement for the following information:

- The information, values and assumptions made in the nutrient calculations;
- Information and evidence to support the assumptions used, especially where these deviate from Natural England's methodological advice (e.g. the Councils evidence on occupancy rates and their long term stability).
- Evidence to support any mitigation planned, including source evidence or link if a website or copies of documents that are not readily or freely available;
- Evidence of types of mitigation (wetlands proposals) including proposed locations to ensure the areas of mitigation are draining relevant areas of mitigation land/WwTW so will function effectively.
- Any additional hydraulic loading or nutrient loading calculations undertaken for wetlands or bespoke mitigation.
- Clarification of how long term management of any mitigation land in particular wetland and other types of SuDS will be secured.
- Maps, locations or identification of how any mitigation that is not within the developer's ownership will be secured. In particular, information on mitigation proposals for the allocations other than Otterpool.
- Any information on winter maintenance programmes or other information material to water quality assessment that may impact the efficacy of proposed nutrient removal systems.

3.8.3 A draft approach to achieving nutrient neutrality was submitted to Natural England on 22/04/2021. Subsequently, comments were received from Natural England in a letter dated 01/06/2021 on the approach to nutrient neutrality. Further information was required on the following aspects:

- Bespoke calculations to show the removal values of the wetlands can be achieved on site.
- Further clarification on the nutrient neutrality calculations, in order to clearly demonstrate how nutrient neutrality will be achieved at Otterpool.
- More detail on the design of the wetlands.

3.8.4 NE letter also clarified that the use of the median removal values for wetlands was acceptable at the current outline stage, but at the detailed stage it must be demonstrated that these values will be achievable on site. Therefore, bespoke wetland specific calculations using estimations of hydraulic and nutrient loading are required, which demonstrate that the efficacy proposed can be achieved at Otterpool Park

3.8.5 All of the above information is presented in the Water Cycle Study (including further recommendations for the detailed design stage).

3.8.6 Alongside the consultation outlined above, a 'Statement of Common Ground' was agreed between Natural England and F&HDC in relation to the nutrient neutrality issues. This is presented as Appendix J.

3.8.7 The updated Water Cycle Study and HRA document which contained an assessment of this was provided as a component of the submitted ES in March 2022 in support of the Application. Subsequent to the preparation of these documents, an updated methodology for assessing Nutrient Neutrality was provided by Natural England. The approach to achieving Nutrient Neutrality was incorporated and a further iteration of the approach to nutrient neutrality was prepared. This was

provided to Natural England and the Local Planning Authority. Comments from AECOM on behalf of the Local Planning Authority (presented in full in Appendix L) were received in September 2022.

3.8.8 This document provides an approach to delivering Nutrient Neutrality which takes into account all previous iteration, consultee comments and evolving methodologies.

4 Comments on the Previous Submissions

4.1.1 This HRA has been provided to support an amended planning submission for the Otterpool Park development. As outlined above, an ~~initial~~ submission was made in 2019, accompanied by an HRA, which was subsequently resubmitted in March 2022. This section outlines the comments on the 2019 and March 2022 submission and subsequent draft documents (including the evolving Nutrient Neutrality calculations) and how these have been addressed in this submission, as presented in Table 3.

4.1.2 As presented in Appendix E, in 2019 Natural England agreed with the conclusions in the HRA, with the exception of assessments made in relation to air quality and Folkestone to Etchinghill Escarpment SAC.

Table 4: Key comments and responses in relation to the 2019 HRA submission

Consultee/Contact	Summary of Comments	Arcadis Response and Reply	Location of Correspondence
NE	Clarification in relation to screening of air quality impacts, with further detailed assessmentas necessary, for Folkestone to Etchinghill Escarpment SAC.	Approach in this amended HRA is in line with the Institute of Air Quality Management's (IAQM) designated sites guidance (2020) addresses this issue	Appendix E
NE	Response to consultation on outline application for residential use development. Agreement with the conclusions of the HRA with regard to recreational disturbance, in that the scheme is not considered to have an adverse effect on the integrity of assessed sites, either alone or in combination with other plans and projects. Attention is drawn to visitor and site management measures being drawn up by F&HDC and Rother District Council in relation to the Dungeness complex.	F&HDC and Rother District Council measures in relation to the Dungeness complex added to the HRA.	Appendix E
Scoping Opinion F&HDC (Report compiled by Temple as LPA advisor) Dated 29/07/2021	With reference to cumulative assessment in the ES: The 'HRA' short list would provide a longer list to assess the cumulative effects on internationally designated sites (such as from recreational pressure). This assessment should be presented within the cumulative assessment in the ES.	The HRA has been modified to account for this comment. This will be carried over to the EIA section (in relation to cumulative effects). Within the HRA, all 'long-list' sites are screened in the HRA for the amended submission (in relation not in-combination effects).	ES Appendix 7.2
Scoping Opinion F&HDC (Report compiled by Temple as LPA advisor) Dated 29/07/2021	Dover County Council Planning Policy and Projects Manager notes that the Thanet Coast and Sandwich Bay Ramsar site and SPA, and the Sandwich Bay SAC fall partly within 30km of the site and partly outside. It is considered that the impact upon the entirety of those designated sites should be scoped into the ES, and not just those parts which fall within 30km of the development site.	The amended HRA has been modified to account for this comment. The assessment includes the Thanet Coast and Sandwich Bay Ramsar site and SPA, and the Sandwich Bay SAC and assesses all vulnerabilities of the site and potential impacts from the development. As such, the entire designated areas are assessed.	ES Appendix 7.2
NE	In relation to the March 2022 submission, Natural England made comments in relation to Air Quality, Nutrient Neutrality and Recreational Impacts	The comments relating to Air Quality and Nutrient Neutrality are addressed in this report. The comments in relation to Recreational pressures are	Comments are presented in Appendix M, further information in

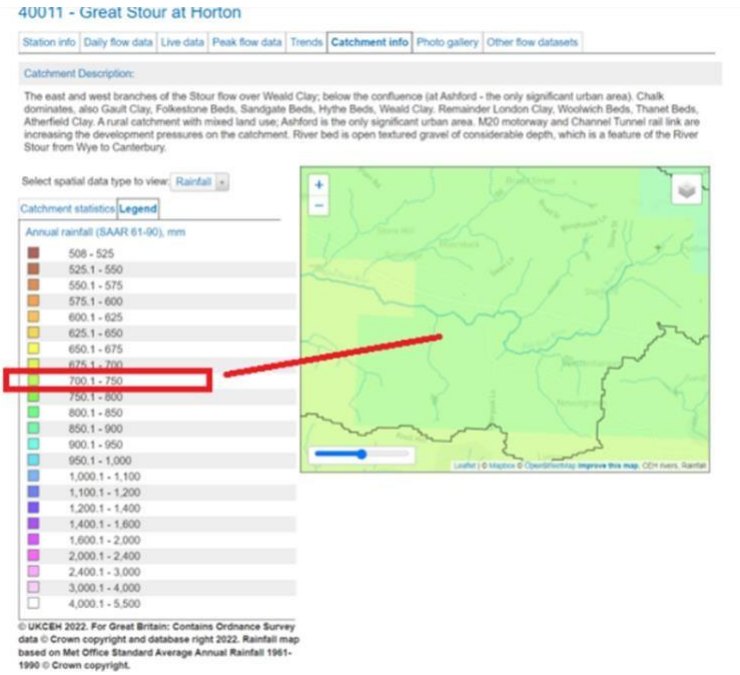
Consultee/Contact	Summary of Comments	Arcadis Response and Reply	Location of Correspondence
		addressed in this report but also in the response provided as Appendix O.	Appendix N,Appendix O
LPA (Prepared by AECOM on behalf of the LPA)	Technical comments on the amended nutrient neutrality approach dated July 2022.	*Technical comments and responses provided in* Table 5 above.	AECOM comments included in Appendix L
NE comments on the July 2022 Nutrient Neutrality calculations	Technical comments on rainfall and load removal of proposed wetlands.	Comments addressed in the submission provided in Appendix P. A summary response is provided below with a full response in Table 6. With regards to the query relating to the rainfall figures utilised, the Arcadis figures were checked and were found to be correct. For surety a sensitivity test was conducted and if the NE figures were utilised, the amount of wetland required would reduce, therefore this aspect of the calculations is considered robust. With regards to the comments relating to the detailed design of the water features, it was confirmed by the competent authority that this related to detailed design at subsequent tiers of the application, and that no further detailed design was required at Tier 1.	Appendix P

Table 5: Comments from AECOM Addressed in this updated HRA document and the associated Nutrient Neutrality Budget (Appendix L)

AECOM Comment	Arcadis Response
The wrong units such that kg TP/yr is used for nitrogen (rather than phosphorus) and kg TN/yr is used for phosphorus (rather than nitrogen). This is only a typographical matter but should be addressed.	The correct units have been updated throughout the reportand appendix documents.
For the Option of being served by Sellindge WwTW (Option 2) they have used different permit concentrations than are given in the Stodmarsh calculator. This WwTW has a permit of 1 mg TP/l and 27 mg TN/l according to the Stodmarsh Calculator, although the post 2025 permit will be tightened to 0.5 mg TP/l. However, the Applicant has used values of 0.3 mg TP/l and 25 mg TN/l in their calculations. The reason why these alternative permit values have been used needs to be clarified. If the permit	Sections 4, 5, 6 and 7 have been updated to reflect the current permit concentrations, as shown in the latest Stodmarsh Nutrient Neutrality Calculator. It was assumed that under this Sellindge WwTW option, the first occupancy will also be post 2025 in line with the tightened P permit of 0.5 mg TP/l. Appendix C provides the supporting calculations. The previous calculations have used a permit of 0.3 mg TP/l and 25 mg TN/l based on the previous consultations undertaken with Southern Water, the Environment Agency

AECOM Comment	Arcadis Response
values in the Stodmarsh calculator are used the amount of mitigation required for Option 2 increases considerably.	(EA) and NE for upgrading Sellindge WwTW to accommodate the Proposed Development as evidenced inAppendix D, along with the relevant July 2022 nutrient budget calculations. It is envisaged that this information still can provide useful information in the event of TP valueis further tightened post 2025 - for example, as part of a potential mitigation option in line with the ongoing Water Industry National Environment Programme (WINEP) studyfor Stodmarsh.
The biggest issue, which the applicant acknowledges, is that whether Option 1 or Option 2 is chosen they don't (using the new calculator tool) currently have anything like enough mitigation identified at this time to demonstrate nutrient neutrality. The proposed wetland area in the previous Water Cycle Study (WCS) (March 2022) was 28.77 ha which means that for Option 1 there is currently a shortfall of approximately 6.88 ha for PCC Scenario 1 and 5.93 ha for PCC Scenario 2. For Option 2, this increases to 30.97 ha for Scenario 1 and 28.13 ha for Scenario 2; the shortfall for Option 2 is even larger if the actual permit values in the calculator tool for Sellindge WwTW are used. We recognise Option 1 is the preferred option but that still has a shortfall of c. 20-25%.	Section 6 addresses the revised mitigation proposals to address the identified shortfall in wetland area for Option 1 (Onsite WwTW) under both PCC scenarios. This involves extending some of the previous wetlands as well as reconfiguring suitable SuDS areas (with surplus storage capacity and footprint area) into stormwater wetlands/bio-retention areas to maximise their nutrient removal ability and wider benefits. Therefore, a total of 35.68 ha of wetland is now available as part of the revised mitigation strategy to meet the 35.65 ha required under the worst-case PCC Scenario 1 (or 34.70 ha under alternative PCC Scenario 2). However, the Proposed Development within the current OPA will only require a total wetland area of 30.64 ha. Further wetland areas within the wider FMP can also be provided, if necessary, when the development plans are more advanced outside the current OPA. We recognise that there is still a significant shortfall in wetland area (approximately 48ha) to address the nutrient loads from Option 2 (Sellindge). Therefore, this is not our preferred approach to the OPA as explained in Section 6.1.2.
To address (3), the Applicant proposes that the current SuDS area within the OPA boundary should be designed as wetlands or bio-retention features to remove surplus P load. They note there is the potential for 8.97 ha of additional stormwater wetlands within the Otterpool Park OPA and FMP. If this is the case, it would be sufficient to address the shortfall for Option 1, the preferred approach. However, this would require further investigation and if that potential has been identified at this point, we would need to understand whether further work was to be undertaken prior to application submission to confirm that potential. Overall, if a resolution to grant outline planning permission is made it is recommended that it is subject to a planning condition that the Applicant identifies and details the additional required for wetland mitigation prior to the next planning stage.	Additional assessment work was undertaken as part of this update to address this issue, as explained in Section 6.2 and our response to the Point 3 above. The updated assessment should now give a sufficient level of extra confidence to the LPA and NE to decide that the proposed mitigations are robust and can achieve nutrient neutrality without causing adverse effects on the integrity of the Stodmarsh designated sites either alone or in combination with other plans or projects. The assessments undertaken to date are precautionary and meet the level of detail expected for an OPA of a strategic site of this nature. Further detail on the mitigation proposals will be submitted as part of the planning conditions for each key development phase or multiple development phases.

Table 6: Project Response to Natural England Comments received October 2022

Natural England Comment from Appendix P	
Natural England has reviewed the latest nutrient budget calculations and we advise that we consider it has one error within the calculations. From reviewing the average annual rainfall at the site using the National River Flow Archive (Catchment Info for 40011 - Great Stour at Horton (ceh.ac.uk)),we advise that the annual average rainfall (mm) used in Stage 2 of the calculations should be set as 750.1 – 800, not 700.1 – 750.	The average annual rainfall is 748mm for the most recent available record period (1961-1990) according to the National River Flow Archive at the NE's specified location (40011 - Great Stour at Horton). Also, the applicable rainfall colour band for Otterpool Park indicates as 700.1-750 mm (see images below).   The above suggests that the current nutrient budget calculations are correct. Nevertheless, Arcadis have undertaken a further sensitivity test to assess the potential implications of changing the rainfall band from 700.1-750 mm to 750.1- 800mm, as described below.

Natural England Comment from Appendix P	
	Worst-case PCC Scenario 1 nutrient budget increased from 367.6 to 399.29 kg/year and the associated wetland area requirement increased from 30.64 ha to 33.27 ha Alternative, PCC Scenario 2 nutrient budget increased from 361.6 to 393.28 kg/year and the associated wetland area requirement increased from 30.14 ha to 32.77 ha Please note that the updated wetland proposals in Oct 2022 report gives a total of 35.68 ha and 35.21 ha of this is available within the current OPA. This also means that the current wetland provision in the OPA is still sufficient to achieve nutrient neutrality for the OPA.
Natural England, in partnership with The Rivers Trust and Constructed Wetland Association, has recently published the document 'Framework approach for Responding to Wetland Mitigation Proposals' which can be found on The Rivers Trust Constructed Wetland Hub. This wetland mitigation framework is being used by Natural England to adequately review wetland proposals and designs which are focused on Nutrient Neutrality mitigation. For this reason, we recommend that the developers utilise this document to assist in their wetland designs. Natural England notes that the Arcadis Nutrient Budget Analysis Update (July 2022) has used the medium nutrient removal efficiency ratings based on literature from Land et al., 2016, to calculate the required size of mitigation wetlands required for the development. However, we advise that this approach does not take into account the inlet concentration, which will strongly influence the load removal in most wetland treatment systems. If the inlet nutrient concentrations are low, then it is unlikely that the wetlands will remove the required load of nutrients sufficiently to achieve nutrient neutrality for the development. We therefore recommend that further design of the wetland should utilise industry best-practice approaches to calculate the nutrient removal and associated wetland area. These include; • The P-K-C* approach • A 'plug flow' model termed the k-C* approach; or • Regression (or exponential decay) equations; Please also note that we advise the wetland designs should use at least two of these approaches, and then the most	We understand from you that NE's recommendation for undertaking further design of the wetlands using the stated alternative industry best-practice approaches is only related to the next detailed design stage. We welcome this clarification and confirm that this will be suitably addressed during Tier 2 and Tier 3 stages, as already highlighted in Arcadis March 2022 WCS report and Oct 2022 Nutrient Budget Analysis Update Report. Therefore, the wastewater wetland design for each main development phase (or multiple phases) will be undertaken based on the recommended new guidance document (Framework approach for Responding to Wetland Mitigation Proposals) and any future detailed guidance provided by NE. The project team has consulted NE since June 2020 to agree the assessment method and key design parameters to develop our proposed nutrient mitigation strategy. As part of this process, NE has agreed to use the medium nutrient removal efficiency ratings based on literature from Land et al., 2016, to calculate the required size of mitigation wetlands required for the current OPA, considering the strategic and evolving nature of large and complex development such as Otterpool Park.

Natural England Comment from Appendix P	
precautionary calculation should be used to inform the nutrient removal rating of the wetland. Natural England notes that the Onsite WwTW will discharge effluent into one of the proposed wetlands. As the nutrient permit levels and effluent volume from the onsite WwTW are known, it is possible to utilise the recommended above approaches to accurately calculate the nutrient removal rate of this wetland. We advise that there are a multitude of factors that can influence the effectiveness of constructed mitigation wetlands. Therefore, we highly recommend that information found in the Wetland Mitigation Framework is considered when designing the nutrient mitigation wetlands. Additionally, further background information on constructed wetlands can be found within the 'Introduction to Freshwater Wetlands for Improving Water Quality (JP044)' report, which was recently published by Natural England.	

5 Scope of HRA

5.1 Overview

5.1.1 All sites in the National Sites Network within 30km (totalling 18) were initially assessed for their potential to be affected by the proposed Development (Figure 2). Their qualifying features, conservation objectives and existing vulnerabilities were used as baseline data along with their proximity to the proposed Development (Table 7). An initial high level screening assessment was undertaken to assess whether the proposed Development has the potential to affect the integrity of any of the sites or their qualifying features.

5.1.2 The 18 sites are as follows:

- Dungeness, Romney Marsh and Rye Bay (with Marine Component) SPA, which is approximately 2.9km south of the proposed Development;
- Folkestone to Etchinghill Escarpment SAC, which is approximately 4.2km north-east of the proposed Development;
- Wye and Crundale Downs SAC, which is approximately 5.8km north of the proposed Development;
- Parkgate Down SAC, which is approximately 9.1km north-east of the proposed Development;
- Dungeness, Romney Marsh and Rye Bay Ramsar, which is approximately 9.9km south of the proposed Development;
- Dungeness SAC, which is approximately 9.9km south of the proposed Development;
- Lydden and Temple Ewell Downs SAC, which is approximately 15.1km north-east of the proposed Development;
- Dover to Kingsdown Cliffs SAC, which is approximately 20.1km north-east of the proposed Development;
- Blean Complex SAC, which is approximately 21.6km north of the proposed Development;
- Sandwich Bay SAC, which is approximately 28.9km north east of the proposed Development;
- Stodmarsh SAC, which is approximately 23.2km north of the proposed Development;
- Stodmarsh SPA, which is approximately 23.2km north of the proposed Development ;
- Stodmarsh Ramsar, which is approximately 23.2km north of the proposed Development;
- Tankerton Slopes and Swalecliffe SAC 29.5km
- The Swale SPA, which is approximately 25.2km north of the proposed Development;
- The Swale Ramsar, which is approximately 25.2km north of the proposed Development; and
- Thanet Coast and Sandwich Bay Ramsar which is approximately 26.5km north-east of the proposed Development
- Thanet Coast and Sandwich Bay SPA, which is approximately 28.5km north-east of the proposed Development.

5.2 Approach to Assessment

5.2.1 In line with the approach in Image 2, the first assessment to make is whether the proposed Development has the potential to impact any of the relevant designated sites. This was done by identifying the pathways through which the proposed Development (in the construction and operation

phase) could impact upon the designated sites. The potential impact pathways relating to the proposed Development were largely determined by three key factors:

- whether there were any sites or qualifying features that could be directly affected by the proposed Development;
- whether there are any sufficiently mobile qualifying features of the sites that, while distant from the proposed Development, may rely on functional habitat that would be affected by the proposed Development (largely birds and bats); and
- whether any of the potential impacts of the proposed Development have the potential to indirectly affect receptors some distance from the proposed Development due to the zone of influence (for example through effects on water regime or increased traffic flow).

5.2.2 Professional judgement has been used in the assessment of relevant impact pathways, taking into account the conservation objectives for Sites in the National Sites Network and their vulnerabilities, to determine whether or not significant effects are likely to result from the proposed Development.

5.2.3 The following ES chapters contain information used as part of this assessment:

- Air Quality, Chapter 6;
- Biodiversity Chapter 7 and particularly ES Appendices 7.15 and 7.16 the Breeding and Wintering Bird Reports;
- Landscape and Visual Impact Chapter 12;
- ~~Socioeconomic~~Socio-economic Effects and Community Chapter 14;
- Surface Water Resources and Flood Risk, Chapter 15; and
- Transport Chapter 16.

5.3 Potential Vulnerabilities

5.3.1 The following vulnerabilities were listed on Site Improvement Plans (SIPs) for the Sites in the National Sites Network that have been scoped into the screening assessment. Vulnerabilities, comprising threats and pressures on particular interest features of the Sites in the National Sites Network, assist in focusing the HRA screening process to those areas of concern in relation to the integrity of the Sites in the National Sites Network and the favourable conservation status of their qualifying features:

- Invasive species;
- Inappropriate scrub control;
- Undergrazing;
- Overgrazing;
- Military pressure;
- Illicit vehicle use;
- Predation;
- Habitat fragmentation;
- Hydrological changes;
- Changes in species distribution;
- Direct impact from 3rd parties;
- Inappropriate water levels;
- Inappropriate ditch management;
- Fisheries: commercial marine and estuarine;

- Coastal squeeze;
- Air pollution
- Public access/disturbance; and
- Water pollution.

5.3.2 In addition to the above, habitat loss or degradation of functionally linked land has also been considered as part of this assessment.

5.4 Impacts Scoped Out

5.4.1 A number of the key threats (listed site vulnerabilities are either threats or pressures) listed within the SIPs relate to direct site-specific management issues which would not be related to potential impacts from the proposed Otterpool Development.

5.4.2 No habitat associated with the coastal environment (e.g. saltmarsh, intertidal habitat) will be directly impacted by the proposed Development, as such, coastal squeeze has been scoped out of the assessment.

5.4.3 With the exception of Stodmarsh, impacts associated with water pollution have been scoped out on surface water receptors beyond 1km of the site boundary, due to the lack of connectivity to the site and / or no shared water catchment area and therefore lack of a potential impact pathway. This is due to the large distances between the Sites in the National Sites Network and the proposed Development (the closest being Dungeness, Romney Marsh and Rye Bay (with Marine Component) SPA and Ramsar, with the marine component being approximately 2.9km south. ES Chapter 15 - Surface Water Resources and Flood Risk provides full details of the background and predicted proposed Development effects.

5.4.4 The exception, Stodmarsh SAC, SPA and Ramsar is due to advice received from Natural England (the site is linked to the proposed Development via the East Stour River catchment.

5.4.5 Temporary air quality impacts due to emissions of dust arising from the site clearance and construction phase of the proposed Development are scoped out due to their distance away from the designated sites. The Institute of Air Quality Management (IAQM, 2014) construction dust guidance requires that construction dust impacts are assessed up to 350m from the locations of demolition and areas within 50m from the route(s) used by construction vehicles on the public highway up to 500m from the main site entrance(s). The closest National Sites Network Site (formerly European Site) to the site are the marine component of the Dungeness, Romney Marsh and Rye Bay SPA (2.9km) and the next closest is Folkestone to Etchinghill Escarpment SAC (4.2km). The other sites are 8.9km to 28.5km away. As no sites are located within these dust impact areas, this aspect of air quality impact is not considered within this report.

5.5 Impacts Scoped In

5.5.1 Fuller consideration of the likelihood of significant effects on the Sites in the National Sites Network in the context of their conservation objectives and vulnerabilities is reported in Section 6. This is summarised in the matrix presented in Appendix A.

5.5.2 Only those potential impacts and effects with potential relevance to the proposed Development and the qualifying features of the Sites in the National Sites Network, as listed in Table 7, have been scoped in for further consideration:

- Functionally linked land: changes in favourable condition of faunal species populations as a result of habitat loss/degradation/disturbance of functionally linked land.
- Air pollution: impact of atmospheric nitrogen deposition – as a result of the increase in vehicular emissions during construction/operation.

- Public access/disturbance – as a result of ~~the~~an increase in recreational pressure ~~in~~during the operational phase.
- Water pollution: changes to water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater, via water treatment works, and drainage to watercourses or ditches within the Stour catchment.

5.5.3 Further details of the rationale for scoping in these effects are presented below.

Functionally linked land - rationale for scoping in effect

5.5.4 Of the sites within 30km of the Otterpool site, only birds designated within SPAs and Ramsar sites were sufficiently mobile to potentially be supported or maintained by habitats within the Otterpool site (no SACs designated for bats were present within 30km).

5.5.5 During consultation with Natural England, while no particular concerns with regard to functionally linked land were raised, the following statement was made with regard to wintering birds:

5.5.6 “We are also pleased to note wintering bird surveys have commenced on the site, which will include establishing whether the site contains important habitat for waders and wildfowl. Given the distance between the proposed site and coastal SPAs/ Ramsar sites, it may be difficult to link birds to specific designated sites. However, the information will be useful in feeding into an overarching green infrastructure strategy for the site.” (extracted from communication presented in full in Appendix B).

5.5.7 The results of these surveys were used to determine the use of the site by populations of birds which are qualifying features of the SPA and Ramsar sites within the vicinity of the site.

Air pollution - rationale for scoping in effect

5.5.8 Some air pollutants (such as NOx which are oxides of nitrogen) can have an effect on vegetation. Ambient concentrations of pollutants and deposition of particles can damage vegetation directly or affect plant health and productivity. Deposition of pollutants (such as nitrogen) to the ground and vegetation can affect the characteristics of the soil, which in turn can then affect plant health, productivity and species composition.

5.5.9 The operational phase of the proposed Development may affect air quality due to a change in vehicular emissions and pollutant concentrations resulting from changes to the flow, speed and composition of traffic on the road network and/or a change in road layout and alignment, leading to a change in vehicular emissions and/or a change in the distance between vehicular emissions and receptors.

Public access/disturbance (recreation) – rationale for scoping in effect

5.5.10 This effect is scoped in due to the potential for a large number of additional people moving into the area. There is potential for sites to experience additional visitor numbers which could exacerbate effects from existing recreational pressure or add to the numbers of visitors to exceed a threshold and cause recreational pressure effects.

5.5.11 The sites that currently list recreational pressure as a vulnerability are the:

- Dungeness, Romney Marsh and Rye Bay (with Marine Component) SPA, of which the coastal component is 8.7km south of the proposed Development and the marine extension is approximately 2.9km south of the proposed Development;
- Dungeness, Romney Marsh and Rye Bay Ramsar, which is approximately 9.9km south of the proposed Development;
- Dungeness, Romney Marsh and Rye Bay SAC, which is approximately 9.9km south of the proposed Development;

- Lydden and Temple Ewell Downs SAC, which is approximately 15.1km north-east of the proposed Development;
- Sandwich Bay SAC, which is approximately 28.9km north east of the proposed Development;
- The Swale SPA, which is approximately 25.2km north of the proposed Development;
- The Swale Ramsar, which is approximately 25.2km north of the proposed Development; and
- Thanet Coast and Sandwich Bay SPA, which is approximately 28.5km north-east of the proposed Development.
- Thanet Coast and Sandwich Bay Ramsar, which is approximately 26.5km north-east of the proposed Development.

5.5.12 These impacts could be:

- Additional footfall causing degradation/erosion of habitats;
- Littering causing degradation of habitats;
- People walking potentially with accompanying dogs causing disturbance to sensitive species such as ground nesting birds;
- Dog fouling causing nutrient enrichment; and
- Inappropriate leisure activities such as camping and picnicking, potentially lighting fires, causing degradation and disturbance.

5.5.13 ES Chapter 14 Socio-economics and Community provides additional details of the predicted proposed Development effects on recreational impacts.

Water pollution - rationale for scoping in effect

5.5.14 The vulnerability of coastal, riverine and wetland National Sites Network Sites (formerly European Site) to nutrient inputs has been a cause for concern in recent years in relation to habitat degradation and maintenance of their favourable conservation status. Stodmarsh SAC, SPA and Ramsar site has been highlighted as being particularly vulnerable to water quality changes, specifically nitrogen and phosphorus. As such, Natural England has advised that all proposed Development within the Stour catchment that has the potential to lead to increased nutrient input (in the case of housing, this is through wastewater from water treatment works, and drainage to watercourses or ditches within the catchment), must demonstrate nutrient neutrality.

5.6 Summary of Sites Scoped In

5.6.1 Of the 18 designated sites identified, all sites were scoped in for further assessment, as there was potential for one or more effects from the proposed Development.

5.6.2 Table 4 below presents all 18 sites and their qualifying features, along with existing vulnerabilities and conservation objectives to illustrate these scoping decisions.

Table 7 Sites in the National Sites Network scoping table

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
Blean Complex SAC	21.6km N	Annex I habitats that are a primary reason for selection of this site: 9160. Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*; Oak-hornbeam forests	Ensure that the integrity of the site is maintained or enhanced, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely	Threats identified in Site Improvement Plan include: Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: Public access/disturbance, related to increased recreational pressure associated with development proposals.
Dover to Kingsdown Cliffs SAC	20.1km NE	Annex I habitats that are a primary reason for selection of this site: 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Ensure that the integrity of the site is maintained or enhanced, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely	Threats identified in Site Improvement Plan include: Inappropriate scrub control Undergrazing Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: Public access/disturbance, related to increased recreational pressure associated with development proposals
Dungeness SAC	9.9km S	Annex I habitats that are a primary reason for selection of this site: 1210 Annual vegetation of drift lines 1220 Perennial vegetation of stony banks Annex II species that are a primary reason for selection of this site: 1166 *Triturus cristatus*: Great crested newt	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.	Threats identified in Site Improvement Plan include: Military pressure Illicit vehicle use Invasive species Inappropriate scrub control Overgrazing Public access/disturbance Direct impact from 3rd parties Air pollution: impact of atmospheric nitrogen deposition Inappropriate water levels Water pollution	Potential effects from: Public access/disturbance, related to increased recreational pressure associated with development proposals
Dungeness, Romney Marsh and Rye Bay SPA (with Marine extension)	8.7km S (with Marine extension 2.9km S)	Qualifies under article 4.1 of the Directive (2009/147/EC), as it is regularly used by >1% of the UK population of the following Annex I species: Bewick's swan *Cygnus columbianus bewickii*	Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of the regularly occurring Annex 1 bird species, under the Birds Directive, in particular: Shingle Shallow coastal waters Sandflat and mudflat communities	Threats identified in Site Improvement Plan include: Military pressure Illicit vehicle use Predation Changes in species distribution Invasive species	Potential effects from: Changes in species distribution, if Annex I bird species use functionally linked habitat on site which is lost/disturbed as a result of the development Public access/disturbance, related to increased

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
		Bittern *Botaurus stellaris* Hen harrier *Circus cyaneus* Golden plover *Pluvialis apricaria* Ruff *Philomachus pugnax* Aquatic warbler *Acrocephalus paludicola* Marsh harrier *Circus aeruginosus* Avocet *Recurvirostra avosetta* Mediterranean gull *Larus melanocephalus* Sandwich tern *Sterna sandvicensis* Common tern *Sterna hirundo* Little tern *Sterna albifrons* Qualifies under article 4.2 of the Directive (2009/147/EC), as it is regularly used by >1% of the biogeographical populations of the following migratory species: Shoveler *Anas clypeata*: 485 wintering individuals (1.2% NW & C Europe non-breeding population)		Public access/disturbance Direct impact from 3rd parties Inappropriate water levels Inappropriate ditch management Coastal squeeze Water pollution Fisheries: commercial marine and estuarine	recreational pressure associated with development proposals
Dungeness, Romney Marsh and Rye Bay Ramsar	9.9km S	Criterion 1 (contains rare, unique examples of natural wetland types), including: Annual vegetation of drift lines and the coastal fringes of perennial vegetation of stony banks (Ramsar wetland type E – sand, shingle or pebble shores). Natural shingle wetlands: saline lagoons (Ramsar wetland type J – coastal brackish/saline lagoons), freshwater pits (Ramsar wetland type K – coastal freshwater lagoons) and basin fens (Ramsar wetland type U – non-forested peatlands).	Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of the regularly occurring Annex 1 bird species, under the Birds Directive, in particular: Shingle Shallow coastal waters Sandflat and mudflat communities	Threats identified in Site Improvement Plan include: Military pressure Illicit vehicle use Predation Changes in species distribution Invasive species Public access/disturbance Direct impact from 3rd parties Inappropriate water levels Inappropriate ditch management Coastal squeeze Water pollution Fisheries: commercial marine and estuarine	Potential effects from: Changes in species distribution, if Ramsar bird species use functionally linked habitat on site which is lost/disturbed as a result of the development Public access/disturbance, related to increased recreational pressure associated with development proposals

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
		Criterion 2 (supports threatened ecological communities), including: Bryophytes e.g. wetland thread-mosses *Bryum* species Vascular plants e.g. sea barley *Hordeum marinum*, Borrer's saltmarsh-grass *Puccinellia fasciculata* and slender hare's-ear *Bupleurum tenuissimum*, sea-heath *Frankenia laevis*, sharp-leaved pondweed *Potamogeton acutifolius*, divided sedge *Carex divisa* and rootless duckweed *Wolffia arrhiza*. Invertebrates e.g. reed beetles *Donacia*, snail-killing flies (*Sciomyzidae*) and soldierflies (*Stratiomyidae*) It also supports vulnerable, endangered or critically endangered wetland species, including: greater water-parsnip *Sium latifolium* Warne's thread-moss *Bryum warneum* water vole *Arvicola amphibius* aquatic warbler *Acrocephalus paludicola* great crested newt medicinal leech *Hirudo medicinalis* a ground beetle *Omophron limbatum* marsh mallow moth *Hydraecia osseola hucherardi* De Folin's lagoon snail *Caecum amoricum* Criterion 5 (regularly supports >20,000 waterbirds); in the non-breeding season the site supports 34,957 waterbirds (5-year peak mean 2002/3 – 2006/7).			

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
		Criterion 6 (regularly supports 1% individuals in the population of the following species): Mute swan *Cygnus olor*; 348 wintering individuals (1.1% British population) Shoveler: 485 wintering individuals (1.2% NW & C Europe non-breeding population)			
Folkestone to Etchinghill Escarpment SAC	4.2km NE	Annex I habitats that are a primary reason for selection of this site: 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely	Threats identified in the Site Improvement Plan include: Undergrazing Inappropriate scrub control Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: Air pollution, related with increase in vehicle movements associated with development proposals Public access/disturbance, related to increased recreational pressure associated with development proposals
Lydden and Temple Ewell Downs SAC	15.1km NE	Annex I habitats that are a primary reason for selection of this site: 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely	Threats identified in the Site Improvement Plan include: Overgrazing Public access/disturbance Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: Public access/disturbance, related to increased recreational pressure associated with development proposals
Parkgate Down SAC	9.1km NE	Annex I habitats that are a primary reason for selection of this site: 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely	Threats identified in the Site Improvement Plan include: Habitat fragmentation Air pollution: impact atmospheric nitrogen deposition	Potential effects from: Public access/disturbance, related to increased recreational pressure associated with development proposals
Sandwich Bay SAC	28.9km NE	Annex I habitats that are a primary reason for selection of this site: 2110 Embryonic shifting dunes	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats	Threats identified in the Site Improvement Plan include: Invasive species Public access/disturbance	Potential effects from: Public access/disturbance, related to increased recreational pressure

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
		2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") 2130 Fixed coastal dunes with herbaceous vegetation ("grey dunes") 2170 Dunes with *Salix repens ssp. argentea* (*Salicion arenariae*) Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: 2190 Humid dune slacks	The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely	Hydrological changes Air pollution: impact atmospheric nitrogen deposition Fisheries: commercial marine and estuarine	associated with development proposals
Stodmarsh SAC	23.2km N	Annex II species that are a primary reason for selection of this site: 1016 Desmoulin's whorl snail *Vertigo moulinsiana*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of the habitats of qualifying species The structure and function of the habitats of qualifying species The supporting processes on which the habitats of qualifying species rely The populations of the qualifying species, and, The distribution of the qualifying species within the site.	Threats identified on the Site Improvement Plan include: Water pollution Invasive species Inappropriate scrub control Air pollution: impact of atmospheric nitrogen deposition	Notwithstanding the distance from the site, recreational pressure is considered to be a potential indirect effect that could result from the proposed Development; however, as the habitat is not currently under this threat and given the marginal and aquatic nature of this vegetation it would be an extremely unlikely effect from any additional recreational pressure. The proposed Development has potential to lead to significant effects associated with changes to water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater via water treatment works, and drainage to watercourses or ditches within the Stour catchment.
Stodmarsh SPA	23.2km N	Qualifies under article 4.1 of the Directive (2009/147/EC), as it is regularly used by >1% of the UK population of the following Annex I species: Great bittern *Botaurus stellaris* (Non-breeding) Hen harrier *Circus cyaneus* (Non-breeding) Qualifies under article 4.2 of the Directive (2009/147/EC), as it is	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.	Threats identified on the Site Improvement Plan include: Water pollution Invasive species Inappropriate scrub control Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: changes in species distribution, if Annex I bird species use functionally linked habitat on site, which is lost/disturbed as a result of the development changes to water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater via water treatment works, and drainage to watercourses or

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
		regularly used by >1% of the biogeographical populations of the following migratory species: Gadwall *Anas strepera* (Breeding) Northern shoveler *Anas clypeata* (Non-breeding) It further qualifies under Article 4.2 by virtue of regularly supporting a diverse waterbird and breeding bird assemblage.			ditches within the Stour catchment.
Stodmarsh Ramsar	23.2km N	Criterion 2 (supports threatened ecological communities), including: Invertebrates (six British Red Data Book wetland species) Vascular plants (two nationally rare plants, and five nationally scarce species) Rare wetland birds	As above.	As above.	Potential effects from: changes in species distribution, if Ramsar bird species use functionally linked habitat on site, which is lost/disturbed as a result of the development changes to water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater via water treatment works, and drainage to watercourses or ditches within the Stour catchment.
The Swale Ramsar	25.2km N	Criterion 2 (supports threatened ecological communities), including: nationally scarce plants e.g. *Bupleurum tenuissimum, Carex divisa, Hordeum marinum* and *Spartina maritima*. at least seven red data book invertebrates e.g. *Bagous cylindrus, Erioptera bivittata, Lejops vittata, Peocilobothris ducalis, Philonthus punctus, Micronecta minutissima, Malchius vulneratus, Campsicnemus majus, Elachiptera rufifrons* and *Myopites eximia* the Mediterranean gull *Larus melanocephalus*	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. The qualifying features include: Dark bellied brent goose *Branta bernicla bernicla* (non-breeding) Dunlin *Calidris alpina alpine* (non-breeding) Breeding bird assemblage Waterbird assemblage	Threats identified on the Site Improvement Plan include: Coastal squeeze Public access/disturbance Illicit vehicle use Invasive species Fisheries: commercial marine and estuarine Changes in species distributions Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: changes in species distribution, if Ramsar bird species use functionally linked habitat on site, which is lost/disturbed as a result of the development

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
		Criterion 5 (regularly supports >20,000 waterbirds); in the winter the site supports 77,501 waterbirds (5-year peak mean 1998/99 – 2002/03). Criterion 6 (regularly supports 1% individuals in the population of the following species): Ringed plover *Charadrius hiaticula*; 917 individuals in spring/autumn (1.2% of the Europe/Northwest Africa population) Black-tailed godwit *Limosa limosa islandica*: 1504 individuals in winter (4.2% of the Iceland/W Europe population) Eurasian wigeon *Anas Penelope:* 15296 individuals in winter (1% of the NW Europe population) Northern pintail *Anas acuta:* 763 individuals in winter (1.2% of the NW Europe population) Northern shoveler *Anas clypeata*: 483 individuals in winter (1.2% of the NW & C Europe population)			
The Swale SPA	25.2km N	Qualifies under article 4.1 of the Directive (2009/147/EC), as it is regularly used by >1% of the UK population of the following Annex I species: Marsh Harrier *Circus aeruginosus* Mediterranean Gull *Larus melanocephalus* Avocet *Recurvirostra avosetta* Bar-tailed Godwit *Limosa lapponica* Golden Plover *Pluvialis apricaria* Hen Harrier *Circus cyaneus* Qualifies under article 4.2 of the Directive	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. The qualifying features include: Dark bellied brent goose *Branta bernicla bernicla* (non-breeding) Dunlin *Calidris alpina alpine* (non-breeding) Breeding bird assemblage Waterbird assemblage	Threats identified on the Site Improvement Plan include: Coastal squeeze Public access/disturbance Illicit vehicle use Invasive species Fisheries: commercial marine and estuarine Changes in species distributions Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: changes in species distribution, if Annex I bird species use functionally linked habitat on site, which is lost/disturbed as a result of the development

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
		(2009/147/EC), as it is regularly used by >1% of the biogeographical populations of the following migratory species: Ringed Plover *Charadrius hiaticula* Black-tailed Godwit *Limosa limosa islandica* Grey Plover *Pluvialis squatarola* Knot *Calidris canutus* Pintail *Anas acuta* Redshank *Tringa totanus* Shoveler *Anas clypeata,*			
Tankerton Slopes and Swalecliffe SAC	29.5km N	Annex II species that are a primary reason for selection of this site: 4035 Fisher's estuarine moth *Gortyna borelii lunatawye* Tankerton Slopes and Swalecliffe supports the majority of the north Kent population of this moth which is approximately 20% of the UK population. The site's north facing slopes are composed of London Clay and support a tall herb community dominated by its food plant hog's fennel *Peucedanum officinale*, together with areas of neutral grassland also required by the species for egg laying.	While not a qualifying species there is an objective to maintain an area of coastal grassland supporting large populations of hog's fennel, 1001 - 3000 individual plants upon which the Fisher's estuarine moth depends. To maintain a viable population of *Agonopterix putridella* Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of the habitats of qualifying species The structure and function of the habitats of qualifying species The supporting processes on which the habitats of qualifying species rely The populations of the qualifying species, and, The distribution of the qualifying species within the site.	There is no Site Improvement Plan for this site but NE have indicated that the sites are sloped and contain tall grassland and hogs fennel plants making them unattractive and difficult for people to access especially when compared with the well maintained paths and amenity grassland adjacent (Canterbury City Council 2014).	The sites are managed and monitored by the Council and are considered to be in a favourable condition. Natural England indicated that the main concern of with respect to this site was people moving off the paths damaging the plants that make up the moths habitat by trampling. At the present time this is not shown to occur and as such Natural England does not currently view this is as an issue (Canterbury City Council 2014).

Protected Site	Approximate distance from study area (Km)	Qualifying features	Conservation objectives	Existing vulnerabilities	Summary of likely effects
Thanet Coast and Sandwich Bay SPA	28.5km NE	Qualifies under article 4.2 of the Directive (2009/147/EC), as it is regularly used by >1% of the biogeographical populations of the following migratory species: Turnstone *Arenaria interpres*	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.	Threats identified in the Site Improvement Plan include: Changes in species composition Invasive species Public access/disturbance Water pollution Fisheries: commercial marine and estuarine	Potential effects from: changes in species distribution, if Annex I bird species use functionally linked habitat on site, which is lost/disturbed as a result of the development
Thanet Coast and Sandwich Bay Ramsar	26.5km NE	A coastal site, consisting of a long stretch of rocky shore, adjoining areas of estuary, sand dune, maritime grassland, saltmarsh and grazing marsh. The wetland habitats support 15 British Red Data Book invertebrates, as well as a large number of nationally scarce species. The site attracts internationally important numbers of turnstone *Arenaria interpres*, and nationally important numbers of nationally important wintering populations of four wader species: ringed plover, golden plover, grey plover and sanderling, as well as Lapland bunting. The site is used by large numbers of migratory birds.	There are a number of beach resorts around this Ramsar site, and the whole coastline is heavily used for recreation. Although there is more use in summer, there are a number of recreational activities that take place year-round on the coast, such as dog walking, and it is these that have most effect on wintering birds. The inland parts of this Ramsar Site are the only areas that are not heavily used for recreation. Water-based recreation includes jet-skiing, power-boat use, sailing, water-skiing and kite-surfing at a number of locations around the site. These activities happen mostly in spring, summer and autumn, but there is some year-round use. Kite-boarding has been noted at two locations and has caused bird disturbance problems. This activity happens intermittently but more often in summer.	Vegetation succession Recreation Water diversion for irrigation/domestic/industrial use Eutrophication Pollution – pesticides/agricultural runoff Recreational/tourism disturbance (unspecified) Unspecified development: urban use	Potential effects from recreation and functionally linked bird habitats.
Wye and Crundale Downs SAC	5.8km N	Annex I habitats that are a primary reason for selection of this site: 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely	Threats identified in the Site Improvement Plan include: Overgrazing Inappropriate scrub control Air pollution: impact of atmospheric nitrogen deposition	Potential effects from: Public access/disturbance, related to increased recreational pressure associated with development proposals

6 SCREENING (STAGE 1)

~~6~~ Assessment of Likely Significant Effects – (Stage 1)

6.1 Functionally Linked Land

Potential impacts to mobile species at SPA and Ramsar sites and surveys conducted

6.1.1 The potential effects of the proposed Development considered whether areas of habitat loss and/or degradation were of a type and quality that could support significant numbers of qualifying species of the SPAs and Ramsar sites which would therefore act as functionally linked land to the designated sites. This could also result in disturbance to qualifying features as a result of construction and/or operation.

6.1.2 Wintering bird surveys were undertaken on the site from November 2016 to February 2017, with an additional visit in November 2019 and update surveys in December 2020; breeding surveys were undertaken from March 2017 to July 2017 with additional visits undertaken in April 2020 and April 2021. The ES Chapter 7 Biodiversity and ES Appendices 7.15 and 7.16 present full details of the results. The results of the first breeding survey undertaken on 20/03/2017 were more reflective of wintering/passage numbers and behaviour with large flocks of birds such as black headed gull, common gull and field fare which were not observed during the breeding season. In order that this data did not skew the breeding bird assessment, this is discussed separately within the breeding and wintering bird reports. Data from bird surveys is summarised for assessment within this chapter.

6.1.3 For Tankerton Slopes and Swalecliffe SAC, the habitats present, (i.e. coastal cliffs with hog's fennel) that maintain the Fisher's estuarine moth *Gortyna borelii lunata*wye, are not representative of the habitats on site. This species is not sufficiently mobile to be affected from proposed Development of the Otterpool site. Impacts are therefore screened out.

Assessment

Bird surveys

6.1.4 A wintering bird survey, consisting of walked transect surveys, according to methods adapted from Gilbert et al. 1998) was undertaken by skilled surveyors between November 2016 and February 2017 (inclusive). Surveys were undertaken twice a month, normally with a two-week gap between surveys. Each of the two survey visits undertaken each month comprised one dawn and one daytime survey (ending at dusk). The surveys were timed to take place across a variety of weather conditions in an attempt to obtain a representative picture of bird numbers and activity.

6.1.5 Prior to undertaking bird surveys, a habitat assessment was undertaken in October 2016 to identify habitats and areas likely to be of value for birds. During this survey, key habitat areas, including likely nesting, breeding and foraging areas were identified (habitat assessments were updated each year between 2018 and 2021).

Wintering Bird Surveys

6.1.6 Transects were walked at a constant pace and birds seen or heard were identified and counted. All bird species were mapped and recorded using standard British Trust for Ornithology (BTO) species and behaviour codes. The data was recorded digitally on hand-held tablets with mobile GIS and GPS capability. Each surveyor started from a different location on site in order to better cover

the entire site within a reasonable amount of time, a location which was varied for each visit to ensure that all parts of the site were surveyed (transect passed within 100m) at varying times of day.

6.1.7 Audio surveys were undertaken after each dusk transect survey in locations where surveyors were most likely to hear golden plover (*Pluvialis apricaria*) calls, for a period of 30 minutes after sunset.

6.1.8 A follow up survey was undertaken in November 2019. This survey followed the same transect based methodology but did not include audio surveys for golden plover.

6.1.9 2020 surveys comprised two transect / walkover surveys of different parts of the site on 21 and 22 December 2020.

Breeding Bird Surveys

6.1.10 A breeding bird survey, consisting of walked transect surveys, according to methods adapted from Gilbert et al. (1998) and in line with the BTO guidance for breeding bird surveys was undertaken by skilled surveyors between March 2017 and June 2017 (inclusive). Surveys were undertaken approximately once every two weeks, up to a total of eight visits. Further single update surveys were undertaken in April 2020 and April 2021. All survey visits began at dawn (approximately one hour before sunrise) or later if birds began singing later due to the weather conditions and low light levels. No two consecutive surveys were started from the same location – this was varied in an attempt to obtain a representative picture of bird numbers and activity.

6.1.11 Transect routes were chosen proactively to align within 100m of notable features and habitat potentially suitable for nesting birds, which was identified during the habitat assessment. The transect route was designed to cover all habitat types within the site.

6.1.12 During the survey, birds identified were placed into four categories: confirmed breeder, probable breeder, possible breeder and non-breeding. The early March results were excluded from breeding bird discussion as the results were indicative of wintering/passage birds.

Results and discussion

6.1.13 Of the breeding bird species that form qualifying features of the sites listed in Table 7, only one (Mediterranean gull) was recorded during breeding bird surveys (one individual on one occasion in late June 2017, 17 individuals recorded in March 2017 (however, this sampling point as previously discussed was more indicative of wintering/passage with no breeding behaviour), and two individuals in late April 2021) not exhibiting any breeding behaviour. The site does not feature suitable breeding habitat for this species, which breeds at coastal wetlands, therefore they are not considered to breed within the site. As a result, it is considered that the site is of no breeding value for this species, it is not functionally linked land and there will be no impact upon their status as a qualifying feature.

6.1.14 Ringed plover, a species listed on the designation for Thanet Coast & Sandwich Bay Ramsar Site was recorded on a single occasion (one individual). Considering the single record of this species over the five years of surveying, it is considered that the site is not functionally linked land and there will be no impact upon their status as a qualifying feature.

6.1.15 During the wintering bird surveys Mediterranean gull were recorded foraging in large numbers on one occasion where 334 birds were recorded on a single visit on 23/02/2017. In winter they are likely to be found feeding in coastal areas with some beaches in Norfolk and Kent attracting hundreds of birds, their diet is based on terrestrial and aquatic insects, marine molluscs and fish. These results indicate that the species were likely on passage to their coastal breeding sites. Therefore, the Otterpool site is not functionally linked land and its development will have no impact upon the breeding fitness of the qualifying feature.

6.1.16 For the wintering bird's qualification, golden plover was recorded (which is listed on the designation for Dungeness Ramsar site and Thanet Coast & Sandwich Bay Ramsar Site). Three individuals were recorded on one occasion (05/12/16) during the wintering bird surveys. While golden

plover can be found in lowland inland agricultural land their preferred habitat is around the coast on coastal marshes and estuaries and on wetlands. The peak count recorded at the Dungeness, Romney Marsh and Rye Bay SPA in 2016 was in the region of 4050 birds (Natural England, 2016). As a result, it is considered that the site is of very limited value for this species and therefore the site is not functionally linked land and there will be no impact upon their status as a qualifying feature.

6.1.17 The 2020 wintering bird surveys identified four more species associated with the Dungeness, Romney Marsh and Rye Bay SPA citation: pochard (single individual), little grebe (single individual), cormorant (two individuals) and lapwing (eleven individuals). These species are part of the wintering bird assemblage for the site. Pochard, little grebe and cormorant exceed 1% of the GB wintering or passage populations. Lapwing are noted to be present in sufficient numbers to warrant their being listed as a major component species of the assemblage (their numbers exceed 2,000 individuals (10% of the minimum qualifying assemblage of 20,000). It is therefore considered that the site is of very limited value for these species, the site is not functionally linked land and there will be no impact upon their status as a qualifying feature.

6.1.18 Under Ramsar Criterion 6, mute swan qualifies as a wintering species. This species was only observed as one individual on one occasion during the breeding season on 26/06/17, this was not observed to be breeding. The Folkestone Racecourse Lake offers limited potential breeding habitat. As a result, it is considered that the site is of very limited value for this species and therefore the site is not functionally linked land and there will be no impact upon their status as a qualifying feature.

6.1.19 Table 5 summarises the results of the qualifying features recorded on site.

Table 8 - Bird species listed as a qualifying feature of the Sites in the National Sites Network recorded on site

Species	Sites in the National Sites Network	Presence on site	Notes
Golden plover *Pluvialis apricaria*	Dungeness, Romney Marsh andRye Bay SPA and Ramsar The Swale SPA andRamsar	3 individuals recorded on 05/12/2016 survey visit	Recorded in very low numbers on a single visit.
Mediterranean gull *Larus melanocephalus*	Dungeness, Romney Marsh and Rye Bay SPA and Ramsar	1 individual recorded on one occasion within the breeding bird surveys. 388 individuals recorded in wintering surveys (November to February 2016/2017), and 17 in the March 2017 breeding survey that was considered to be typical of more wintering behaviour due to results the species recorded in breeding bird surveys. There were less than 25 on every visit with the exception of 334 of these individuals recorded on a single visit on 23/02/2017. These birds are likely to be on passage to breeding sites elsewhere.	Listed in both designations due to breeding status on the designated sites. Considered not to breed within the site.
Mute swan *Cygnus olor*	Dungeness, Romney Marsh and Rye Bay Ramsar	1 individual on one occasion during the breeding season on 26/06/17	Possible breeder but the site is unlikely to maintain this species

Species	Sites in the National Sites Network	Presence on site	Notes
Pochard *Aythya farina*	Dungeness, Romney Marsh andRye Bay SPA	1 individual recorded during the December 2020 wintering bird surveys	Recorded in very low numbers on a single visit.
Little grebe *Tachybaptus ruficollis*	Dungeness, Romney Marsh and Rye Bay SPA	1 individual recorded during the December 2020 wintering bird surveys	Recorded in very low numbers on a single visit.
Cormorant *Phalacrocorax carbo*	Dungeness, Romney Marsh and Rye Bay SPA	2 individuals recorded during the December 2020 wintering bird surveys	Recorded in very low numbers on a single visit.
Lapwing	Dungeness, Romney Marsh and Rye Bay SPA	11 individuals recorded during the December 2020 wintering bird surveys	Recorded in low numbers on a single visit.
Ringed Plover	Thanet Coast & Sandwich Bay Ramsar Site	1 individual recorded during the March 2017 bird surveys	Recorded in low numbers on a single visit.
Gadwall	Stodmarsh SPA and Ramsar Site	Peak count of 28 in December 2016 and January 2017	Recorded in low numbers on two visits only.

Conclusion

6.1.20 In conclusion, no likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development due to functionally linked land.

6.1.21 This assertion was supported by Natural England following the previous submission, and none of the findings of the subsequent surveys have provided any additional information that would cause this to be questioned.

6.2 Air Pollution Assessment (Screening - Stage 1)

Thresholds for ~~Assessment~~Scoping

6.2.1 While many of the designated sites have air quality as sensitivities, there is a threshold of pollutants for the requirement to measure potential effects for air quality, set by National Highways' Design Manual for Roads and Bridges LA 105 Air Quality guidance (as below that level there would be no appreciable difference in air quality). This threshold criteria for air quality assessment is that sites within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. Beyond 200m from the emission source, impacts are generally accepted to be negligible. The change criteria are set at:

- a change of +/- 1000 vehicles per day,
- +/- 200 Heavy Duty Vehicles (HDV).
- A change in speed band; or
- A change in carriageway alignment by >=5m.

6.2.2 Under these criteria, the only site in the National Sites Network ~~Sites (~~(NSN, formerly European Sites) scoped into the assessment is the Folkestone to Etchinghill Escarpment SAC~~.~~

~~6.2.3~~6.2.2 ~~Full details of the~~ as the traffic increase in AADT from the development exceeded the criteria in all assessment ~~of roads and~~years. There were no other NSN sites ~~applicable to the proposed Development are provided~~ within ~~the Air Quality ES Chapter 6.~~200m of the roads in the traffic model. In line with consultation with Natural England, this level of change would suggest that the assessment of potential air quality impacts would need to proceed to Appropriate Assessment.

Potential impacts from poor air quality (Screening)

~~6.2.4~~6.2.3 Air pollution in the form of elevated nitrogen oxides (NOx) concentrations and nitrogen (N) deposition generated as a result of traffic can adversely affect ecosystems, particularly where sensitive habitats including aquatic habitats are the qualifying features. The impact pathways are complex but this pollution can inhibit metabolic pathways and act as a macro-nutrient that will over stimulate growth of some species to the detriment of others (WHO 2000).

~~Impact Assessment~~

~~Deferring to the Local Plan HRA for ecological sites with a National Sites Network designation~~

~~6.2.5 The ecological assessment has been carried out in accordance with the methods and principles detailed in~~ Initially, it was proposed that in line with the Institute of Air Quality Management's ~~(IAQM)~~ designated sites guidance (2020~~).~~

~~6.2.6 The IAQM ecological guidance states that for impacts on sites with a SAC or SPA designation, the assessor should first consider whether the air quality issues have been considered in the Local Plan HRA. Additionally, it states that if this has been done then it is appropriate and in line with government guidance to defer to that over-arching Local Plan assessment. Deferring 'upwards' to the Local Plan also addresses the undesirable situation of having multiple traffic and air quality models for a single local authority area and the potential for the modelling inconsistencies that would follow.~~

~~6.2.7 The only site with a designation in the operational phase local air quality study area is the Folkestone to Etchinghill SAC. The proposed Development is included as an allocation in both~~), the initial HRA would defer to the Local Plan HRA (Folkestone and Hythe District Council (F&HDC) Core Strategy Review (LUC, 2018) and the F&HDC Places and Policies

Local Plan ~~and Core Strategy Review (CSR) to the end of the respective Local Plan~~(PPLP) (LUC, 2018) and Core Strategy Review ~~periods in 2031 and 2037.~~

~~6.2.8 The CSR~~ HRA ~~(Ref 6.29) carried out on behalf of F&HDC in December 2018 by LUC concluded that there would be~~Addendum (LUC 2019)), concluding no ~~adverse effects on Sites in the National Sites Network (including Folkestone to Etchinghill SAC) by the end of the CSR period in 2037 in a high growth scenario whereby 8,000 residential units would be built out over the period (including 5,925 at~~ significant effects predicted for the proposed Development~~).~~

~~6.2.9 An addendum to the CSR HRA was published by LUC in November 2019 (Ref 6.30). It stated that the addendum report~~. The proposed Development was ~~produced in response to proposed changes to the Folkestone and Hythe CSR, which contained a new housing need figure following the publication of the Government's new standard methodology for calculating housing need. This served to increase the~~ allocated ~~number of residential units at the proposed Development to 6,375 by 2037 (the current indicative schedule for the proposed Development estimates 6273 homes will be built by 2037), however the overall number of units built out across the CSR period is 7,700, which is below the 8,000 unit scenario assessed in the CSR HRA. The HRA addendum therefore concluded that as the overall housing quantum was lower, the findings of the CSR HRA would remain valid and that impacts from air pollution to Sites in the National Sites Network identified~~ within the Local Plan HRA ~~will be adequately mitigated for and will not lead to~~which concluded that there were no adverse ~~effects~~impacts on the integrity of the Folkestone to Etchinghill SAC, either alone or in-combination with other plans ~~and projects.~~

~~6.2.10 Therefore, in line with the IAQM guidance, assessment of impacts on ecological sites from the operation of the proposed Development should be deferred upwards to the CSR HRA.~~

~~6.2.11 For impacts on Sites in the National Sites Network in 2044 (i.e. beyond the CSR period), it is highly likely that the assessment approach adopted in the air quality ES chapter (i.e. using 2030 emission rates with 2044 traffic (due to the horizon year of the current Defra tools) would produce overly worse case results as emission rates are expected to decrease over time. It would be inappropriate to undertake a HRA using such results given the inherent uncertainty associated with making predictions so far into the future. In any case the air quality issues would be explored in the future with a greater degree of certainty when the F&HDC are required to publish a Local Plan document that covers the period up to and beyond 2044. This future assessment would include information which the current 2044 traffic data used in the assessment presented in this chapter does not contain such as the traffic effect of any updated F&HDC Local Plan, or the Local Plans of neighbouring local authorities (the current 2044 assessment has accounted for future growth with generic annual growth factors).~~

~~6.2.12~~6.2.4 ~~Natural England were contacted regarding the approach to assessment of air quality impacts on Sites in the National Sites Network (Folkestone to Etchinghill SAC) with regards to deferring to the findings of the Local Plan HRA for the March 2022 submission of this HRA document. Natural England acknowledged receipt of the initial query and follow up queries on behalf of Otterpool LLP we also sent to Natural England (all correspondence can be seen in ES Appendix 7.2). No response was received at the time of writing the March 2022 submission of this HRA, therefore it was assumed to be acceptable to defer to the findings of the HRA completed on behalf of F&HDC in support of the~~. These documents underpin the 2020 People and ~~Policies~~Places Local Plan ~~and the draft Core Strategy~~ Review~~, in line with current guidance (IAQM, 2020) A Guide to the Assessment of Air Quality Impacts on Designated Nature Sites. The relevant paragraphs of the guidance document are detailed as follows:~~.

~~*"5.3.3 For individual planning applications for conventional residential or mixed-use development where European sites are a consideration, the assessor should first investigate whether the air quality issues have already been fully explored for the Local Plan HRA. If this has been done, then it would*~~

be appropriate and in line with government guidance to defer to that over-arching Local Plan assessment. This should be a suitable approach for windfall development as well as actual allocations, as Local Plans all make an allowance for a specified quantum of windfall development in particular locations and this should be included in the strategic Local Plan air quality assessment and HRA.

5.3.4 Similarly, if a given local authority believes that Neighbourhood Plans will be coming forward in their authority boundary, they should consider including any sites allocated in those plans in their air quality modelling. This would also avoid problems for the planning application or Neighbourhood Plan that might otherwise result from the Wealden judgment (see Box 3.1). Deferring 'upwards' to the Local Plan also addresses the undesirable situation of having multiple traffic and air quality models for a single local authority area and the potential inconsistencies that can be introduced in such circumstances."

6.2.13 The guidance advises that where the development has been included and fully explored in the Local Plan (as is the case for Otterpool Park in the Core Strategy Review (CSR)), it would be appropriate for the developer/applicant to defer upwards to the findings of the Local Plan HRA. LUC and AECOM undertook various iterations of the Core Strategy Review HRA on behalf of FHDC between 2018 and 2020 where nitrogen deposition from NOx was quantified across the CSR period and included the 'Garden Settlement' in the traffic and air quality estimates. The Core Strategy Review and HRA was adopted in March 2022 and did not consider ammonia related nitrogen deposition.

6.2.14 As outlined in Appendix M, Natural England subsequently raised concerns that the assessment should have considered ammonia deposition. This consideration was later clarified, as outlined in Appendix N, that this can be assessed at a subsequent stage of the planning process (this application is prepared at Tier 1 with two subsequent Tiers proposed within the planning approach). It is noted that ammonia from road emissions is an emerging area of concern and that it would be appropriate to assess this in full in future, as appropriate tools become available in the public domain, at subsequent stages of the tiered application process. This is in line with other aspects of Air Quality assessment within the submission, for example it has been secured with FHDC to defer the air quality damage cost assessments to tier 2/3 (phase-wide masterplanning and reserved matters stages of approval respectively) on a phase by phase basis rather than for the entire outline application owing to the uncertainty of predicting so far into the future within the confines of the damage cost methodology; this was partly due to Defra's Emission Factor Toolkit (EFT) being periodically re-released to better reflect contemporary fleet projections/policy. As each phase is assessed the newest toolkit can be used taking into account the updated modelling. This stepped approach is in line with Natural England's recommendations for Competent Authorities on the assessment of road traffic emissions[4].

6.2.15 The Otterpool Park application ES (Chapter 6: Air Quality) presents a thorough and robust assessment of air quality impacts over the delivery of the development, culminating in the assessed 'worst-case' scenario in 2044 when full development build out is anticipated.

6.2.16 The assessment that these impacts will not result on an impact on the designated site (as predicted at this tier) is supported by an initial summary consideration of the issue of ammonia impacts which indicates that it is likely that ammonia levels will reduce from the road at the SAC in question over the assessment period with and without the proposed new garden settlement, due to changes in the makeup of the road traffic fleet (the rationale for this is presented in Appendix Q). The applicant is committed to monitoring the air quality position at

[4] NE Internal Guidance – Approach to Advising Competent Authorities on Road Traffic Emissions and HRAs V1.4 Final - June 2018

future delivery milestones through the submission of ES updates at each phase of the development (note: NE will be consulted on these submissions as a matter of course, enabling further evidence to be presented at future relevant stages). For each submission, we will be able to take into account that phase in isolation plus in-combination effects with previous phases, using real world data and the most up to date emission factors.

6.2.171.1.1 Following outline application stage there are a further series of planning approval stages before any development can be fully consented and delivered.

6.2.18 There are phase-wide obligations that will likely include review of the environmental effects identified at outline stage and any relevant revised mitigation measures that would be relevant at that stage. It is at this stage where the effects of ammonia could be considered within an updated air quality assessment for agreementSubsequent consultation with relevant stakeholders, including Natural England.

6.2.191.1.1 Alternatively, the reserved matters stage offers an additional opportunity to address updates required to the ES material to reflect the environmental effects anticipated at that time.

6.2.20 As shown raised queries in the Flow Chart in Image 2, there are a number of mitigation options available in the unlikely event that impact pathways are identified, these could include:

- Removal of cattle from the SAC site (excretion from cattle is a major source of ammonia "The vast majority of ammonia emissions come from agriculture via the spreading of manures, slurries and fertilisers"[5]);
- Removal of cattle at night-time from the SAC;
- Changes to the road speed or layout (optimal road speeds result in lower emissions from vehicles);
- Changes to the ventilation of the tunnel portal to reduce N loadings at portal areas (the tunnel portals concentrate emissions in these locations, if this is found to be an issue there are potential approaches to disperse the in-tunnel emissions).

6.2.21 It is proposed to include necessary requirements to monitor and assess updated air quality information as may reasonably be required prior to the approval of relevant reserved matters. Given that:

- 6.2.5 The calculations to date show that ammoniarelation to nitrogen deposition will reduce in all future scenarios with or without the development (Appendix Q). This calculation was conducted using a tool developed by National Highways (NH), as opposed to CREAM[6]; as the NH tool has been peer reviewed by the IAQM (and in development of the tool NH reviewed CREAM and advised against its use in NH scheme assessments). As the road is an NH managed roadfrom road traffic ammonia (NH3), but it was determined it was appropriate to use the NH tool. Natural England have accepted use of the NH tool on a number of NH schemesagreed that this could be assessed at subsequent tiers through a planning condition. Further discussion is provided in XXXX.

- The SAC is currently in 'Favourable' condition with a requirement to 'Maintain' the designated features;

6.2.6 It is considered appropriate to defer It is determined that it is appropriate to progress to Appropriate Assessment at this tier, based on the nitrogen deposition results from NOx emissions presented in Chapter 6 (Air Quality) of the Environmental Statement.. In addition, the projected change in Nitrogen Deposition of the DS (do something) against the DM (do minimum) is >1% of the

[5] Emissions of air pollutants in the UK - Ammonia (NH3) - GOV.UK (www.gov.uk)

[6] Air Quality Consultants - Air Quality Reports, Resources & Tools (aqconsultants.co.uk)

habitat Lower Critical Load (LCL) during 2044, therefore in line with consultation advice from Natural England, this needs to be assessed at the Appropriate Assessment stage.

- As such, the assessment of impacts resulting from this impact pathway at this time.

6.2.221.1.1 This approach has been supported by Natural England. In an email dated 09/09/2022 (Appendix N), Natural England stated:

"Given the evolving approach to the inclusion of ammonia in road traffic assessments, we accept that further time may be needed to include ammonia as part of the air quality assessment. Whilst an air quality assessment will need to be included as part of the ES and HRA for the outline application, we would accept that an assessment which includes ammonia could follow at a later stage. As we discussed, the tiered approach to the consideration of this development provides the opportunity for Natural England to comment on this detailed aspect of the ES and HRA when this further assessment is produced."

6.2.23 In line with this advice, a proposal of an approach to the screening of air quality changes Air Quality Impacts within the HRA is presented in a flow chart in Image 2. The flow chart demonstrates the following key aspects):

1) The conclusion that the proposed development will not cause a significant impact to the SAC (impacting the integrity of the SAC) either as currently modelled, or once ammonia is added (through a logical assessment of the current status of the site and the projected future nitrogen deposition). This is based on the modelling presented in Appendix Q.

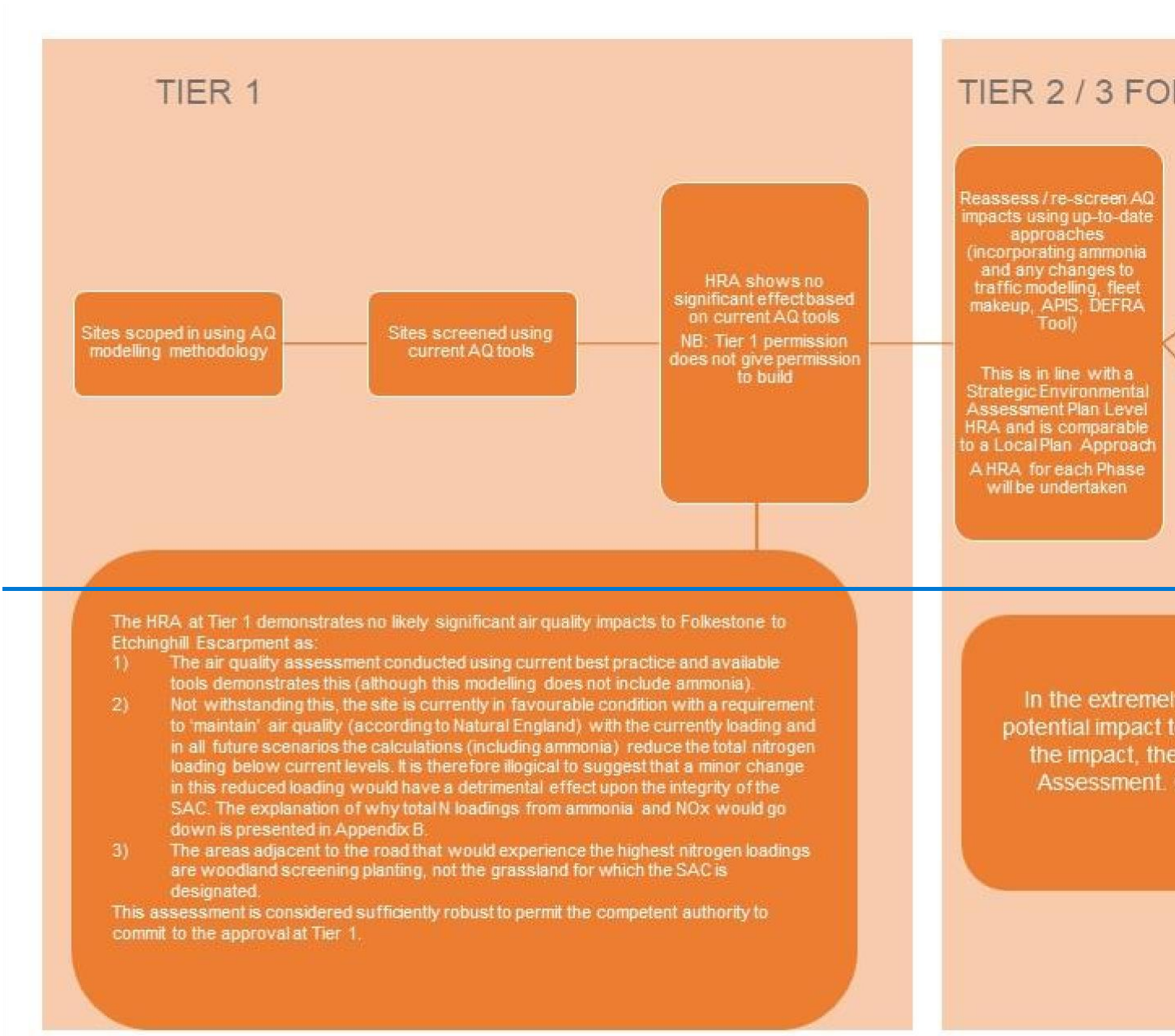
2) It is considered appropriate to conclude that air quality impacts are unlikely to result in an impact to the SAC (based on the information at this stage as a) this has been assessed through a robust assessment based on current guidance and tools which demonstrate no significant impact upon the SAC and b) that it can be shown that even with ammonia there is no logical reason that the future scenario would impact the condition of the SAC

3) That this impact pathway should be screened at subsequent stages, and that in the unlikely event future modelling (accounting for changes in the DEFRA emissions tool kits and the uncertainty surrounding the assessment of ammonia deposition) demonstrates an issue, there is a suite of mitigation that could be employed i.e. changes in management outlined above.

6.2.24 As demonstrated above and in the flow chart in Image 3, the current modelling indicates that there is no likely significant effect upon the SAC. The approach proposed however allows for future modelling to be assessed through HRA, as tools and models are updated. The process outlined demonstrates that there is no way that approval at Tier 1 could permit an impact to the SAC, and that all foreseeable outcomes from further assessments can be accommodated, and therefore this impact pathway can be screen through HRA at subsequent stages, as appropriate.

6.2.256.2.7 In summary, air quality impacts to Folkestone to Etchinghill Escarpment SAC are assessed within the Air Qualityis explored in Section 8, Appropriate Assessment Presented in Appendix 6 of the ES. It is recommended that this impact pathway is screened through HRA at subsequent Tiers, to ensure subsequent assessments account for the ever evolving field of air quality assessment. HRA documentations should be obtained at subsequent tiers of the planning application process, in line with Natural England's recommendations provided in Appendix N..

Image 3: Rationale for the proposed approach to ammonia modelling within HRA at the three Tiers of the Application process



6.3 Public Access/Recreational Disturbance Assessment (Screening Stage 1)

Sites with potential for impacts due to recreational pressure

6.3.1 The eighteen sites listed in Section 5 have the potential to be impacted as a result of recreational pressure. ~~T~~This section describes systematically how these sites have been taken forward for assessment. Firstly, four of the eighteen sites have been classified as being *without* existing recreational vulnerabilities, namely:

- Blean Complex SAC, which is approximately 21.6km north of the proposed Development;
- Stodmarsh SPA, SAC and Ramsar Site, each of which are approximately 23.2km north of the proposed Development.

6.3.2 These sites have accordingly been scoped out of the public access / recreational disturbance assessment.

~~6.3.2~~6.3.3 The Tankerton Slopes and Swalecliffe SAC currently has no Site Improvement Plan publicly available and no specific Conservation Objectives or Vulnerabilities listed. However, information from consultation with Natural England was referenced within the Canterbury District Local Plan HRA (Canterbury City Council 2014). NE have indicated that this site is sloped and contains tall grassland and hog's fennel plants making it unattractive and difficult for people to access especially when compared with the well-maintained paths and amenity grassland adjacent. The site is managed and monitored by the Council and considered to be in a favourable condition. NE indicated that the main concern with respect to this site was people moving off the paths trampling the plants that make up the moth's habitat. At the present time this is not shown to occur ~~and as such NE does not currently view this is as an issue. This added to being~~. In addition the site is 29.5km from the proposed Development site ~~scopes out the~~, making it reasonable to assume that there is no likely significant effect in relation to recreational pressure. The Tankerton Slopes and Swalecliffe SAC has therefore been screened out from ~~any likely significant effects~~further assessment.

6.3.4 Parkgate Down SAC, whilst being located within 10km of the proposed Development, is not accessible to the public. The site is designated for calcareous grassland and orchids and is currently managed as a nature reserve by the Kent Wildlife Trust (KWT). No public rights of way enter the site and a warden is employed by KWT to manage and monitor the site and oversee implementation of access restrictions to protect sensitive ecological features including the orchid assemblage for which the site is designated as a SAC. The entire site is currently in favourable condition as evidence of the current successful management. Furthermore, the site is located in excess of 5km from any notable residential settlements (LUC 2018). Therefore, the additional population from the proposed Development could not realistically have any negative effect on the integrity of the SAC or on its qualifying features. As such, effects are not considered to be significant and ~~therefore~~ this site has ~~also~~ been scoped out of the assessment.

~~6.3.3~~6.3.5 The following sites have been identified as having existing recreational vulnerabilities:

- Sandwich Bay SAC, which is approximately 28.9km north east of the proposed Development;
- Swale SPA, which is approximately 25.2km north of the proposed Development;
- Swale Ramsar, which is approximately 25.2km north of the proposed Development;
- Thanet Coast and Sandwich Bay SPA and Ramsar Site, which is approximately 28.5km north-east of the proposed Development; and
- Lydden and Temple Ewell Downs SAC, which is approximately 15.1km north-east of the proposed Development.

6.3.46.3.6 These sites are over 15km in distance from the proposed Development, with five of the six sites being over 20km from the proposed Development. None of these sites have been highlighted as being of concern from a public access / recreational disturbance perspective during consultations with NE. GivenAn evidence review of visitor travel distances undertaken by Wood (2021) suggests that 75% of visitors to a site typically live within a distance of less than 6-7km, although it is also noted that this is not possible to standardise given settlement distributions and other local factors. However it would suggest that the likely behaviour of the residents of the proposed Development, these sitessites listed in paragraph 6.3.5 are likely to be too far away from the proposed Development to attract any an increase in visitor numbers that could lead to a likely significant numbers of visitors. Accordingly, effectseffect on these sites are not considered to be significant and these five sites have also been scoped out of the assessment.recreational pressure.

Finally, consultationsSites of particular stakeholder interest

6.3.56.3.7 Consultations with F&HDC and NE have identified sixthe following sites as beingto be of potential concernparticular interest in relation to recreational pressure arising from the proposed Development. These sites are as follows, as presented in Appendix D, namely:

- Folkestone to Etchinghill Escarpment SAC, which is approximately 4.2km north-east of the proposed Development;
- Wye and Crundale Downs SAC, which is approximately 5.8km north of the proposed Development;
  - Dover to Kingsdown Cliffs SAC, which is approximately 20.1km north-east of the proposed Development; and
  - Dungeness complex (comprising a total of three sites, namely the Dungeness, Romney Marsh and Rye Bay SPA and Ramsar Site and the Dungeness SAC) (nearest points, coastal 8.7km south, and marine 2.9km south).

6.3.6 These sites have been scoped in to the assessment and are discussed in further detail in the following section.

Sites of particular stakeholder concern

6.3.7 Consultations with F&HDC and Natural England identified the following to be of particular stakeholder concern (in relation to air quality and recreational pressure mainly), as presented in Appendix B and Appendix D, namely:

- Folkestone to Etchinghill Escarpment SAC, which is approximately 4.2km north-east of the proposed Development;
- Wye and Crundale Downs SAC, which is approximately 5.8km north of the proposed Development;
  - Dover to Kingsdown Cliffs SAC, which is approximately 20.1km north-east of the proposed Development; and
- Dungeness complex (comprising the Dungeness, Romney Marsh and Rye Bay SPA and Ramsar Site and the Dungeness SAC) (nearest points, coastal 8.7km south, and marine 2.9km south).); and
- Dover to Kingsdown Cliffs SAC, which is approximately 20.1km north-east of the proposed Development.

6.3.8 These locations are described below:

- The Folkestone to Etchinghill Escarpment SAC is located approximately 4km4.2km to the north-east of the proposed Development. This is the closest (terrestrial) site in proximity to the proposed Development. It is an extensive area (over 180 hectares) of chalk grassland to the north of Folkestone, designated as a SAC for its dry grasslands and scrublands on

chalk or limestone, including important orchid sites (the site is home to three nationally rare plants). The escarpment is bisected by the A20, but it remains one of the largest remaining areas of unimproved chalk downland in Kent. ~~It does not currently list recreational pressure as a threat.~~The SAC is currently managed by the White Cliffs Countryside Project (WCCP) in partnership with Natural England; the SAC Conservation Management Plan is implemented by the WCCP. Key components of the current management of the SAC include cattle-grazing, provision of fencing and gates, invasive species control and mechanical scrub management. The site is actively managed, including provision of gates and fencing, and the presence of an on-site warden.

- Wye and Crundale Downs SAC is located approximately 6km to the north of the proposed Development. This is an extensive area of approximately 110 hectares of chalk grassland located between the settlements of Wye and Hastingleigh. The site is designated as a SAC for its semi-natural dry grasslands and scrubland, including important orchid sites. The Downs sit between the M20 and A28 to the north of Ashford (on the southern edge of the North Downs). ~~It does not currently list recreational pressure as a threat.~~

- The Site Improvement Plan~~The Dover to Kingsdown Cliffs SAC is located 20.1km north east of the proposed Development. It is designated for its vegetated sea cliffs and semi-natural dry calcareous grasslands and scrubland. These are primary reasons for designation of this site. The vegetated sea cliffs are generally dangerous to approach or physically inaccessible and are therefore inherently protected from recreational pressure. The cliff-top grasslands are crossed by numerous footpaths which are used by recreational walkers (URS 2012).~~ ~~It~~ does not currently list recreational pressure as a threat.
- The Dungeness complex comprises the Dungeness, Romney Marsh and Rye Bay SPA and Ramsar Site and the Dungeness SAC. The terrestrial/coastal component is closest at 8.9km to the south west of the proposed Development, the marine component is 2.9km south. The terrestrial/coastal site was initially designated in 2016 for its importance for supporting breeding and wintering waterbirds, birds of prey and passage warblers. The marine component was recently designated in 2017 to include important marine foraging areas used by little, common and sandwich terns from breeding colonies within the existing SPA. The Dungeness SAC consists of the UK's largest shingle structure which is one of the best examples of a vegetated shingle beach in Britain and Europe. It is also designated for great crested newt as a primary qualifying feature of the site. Recreational pressure is currently listed as a threat.

The Dover to Kingsdown Cliffs SAC is located 20.1km north east of the proposed Development. It is designated for its vegetated sea cliffs and semi-natural dry calcareous grasslands and scrubland. These are primary reasons for designation of this site. The vegetated sea cliffs are generally dangerous to approach or physically inaccessible and are therefore inherently protected from recreational pressure. The cliff-top grasslands are crossed by numerous footpaths which are used by recreational walkers (URS 2012).
~~Background and Methodology (for assessing sites with a vulnerability to recreational pressure)~~

~~6.3.9 In order to make an assessment of the potential effects of recreational pressure, the following method has been used. The potentially most sensitive sites have been assessed in detail using existing survey information or bespoke survey information under the assumption that the less sensitive sites, further from the development would be less likely to be affected by the proposal as follows:~~

- ~~Baseline data relating to each of the sites of particular stakeholder concern and/or within 10km were collated, including existing information, where known, about visitor numbers and~~

travel patterns.The Site Improvement Plan does not currently list recreational pressure as a threat.

6.3.9 Of the sites listed above, the first two sites – Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC – have been scoped in and are taken forward for Appropriate Assessment (refer to Section 8).

•6.3.10Both the Dungeness complex (comprising three sites, namely the Dungeness, Romney Marsh and Rye Bay SPA and Ramsar Site and the Dungeness SAC) (nearest points, coastal 8.7km south, and marine 2.9km south) and the Dover to Kingsdown Cliffs SAC have been further analysed in relation to available visitor numbers and travel patterns and the potential for a likely significant effect. Existing visitor survey data was available for the Dungeness, Romney Marsh and Rye Bay area from surveys undertaken in 2014 and 2015 as part of the Core Strategies HRA for Rother District Council and F&HDC as well as information contained with the Dungeness Complex Sustainable Access and Recreation Management Strategy (SARMS) and supporting documents (The Places Team, 2017). Existing information on Parkgate Down SAC was available in the HRA on the F&HDC Places and Policies Plan 2017 (LUC 2018).This methodology was agreed with Natural England as evidenced in email correspondence set out in Appendix D.

6.3.11 Visitor surveys were undertaken at locations within carparks adjacent to the Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC over the course of four days in 2017 – two consecutive weekdays (30th/31st August) and a weekend (23rd/24th September). Consideration has also been taken of the likely population generated by the proposed Development, the proposed Development design which includes accessible recreational greenspace, and travel characteristics / visitor patterns identified from visitor surveys.

- Each survey day included early morning (7am – 9am) and early evening (5pm – 7pm) visitor counts, and interviews (where visitors may be more likely to be local residents) in addition to periods during the day. Surveyors undertook both counts of visitor numbers within specific time periods as well as interviews with visitors. This methodology was agreed with Natural England and F&HDC.
- Consideration of the potential effects of the proposed Development on recreational pressure, taking into account the likely population generated, the proposed Development design which includes accessible recreational greenspace, and travel characteristics / visitor patterns identified from visitor surveys.

Survey data for sites of particular stakeholder concern

Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC

6.3.10 The chalk grasslands and orchids, for which the SAC is designated, are susceptible to recreational activities including dog walking and associated nutrient enrichment which may alter the soil chemistry and increase the prevalence of competitive species, or by physical disturbances such as through trampling, vandalism, or fire. Due to the proximity of the site to Folkestone and other towns and villages in north east Shepway, parts of the SAC already receive relatively high levels of recreational access and discussions with the White Cliffs Countryside Partnership (WCCP) Project Manager, Kirk Alexander, revealed recent damage by trampling and theft of the rare orchid species, which has resulted in the management team to consider the potential for additional protective measures to conserve the orchid populations. (LUC 2018). Nevertheless, recreation at the site is currently well managed and

recreation is not identified as a current pressure or threat in Natural England's Site Improvement Plan.

6.3.11 Visitor surveys were undertaken by Arcadis in 2017 at two locations in carparks adjacent to the Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC.

6.3.12 These surveys were undertaken during August and September 2017 to determine level of use, principal recreational uses (e.g. walking, fitness, dog walking), likely catchment areas for visitors and principal mode of travel used to reach each destination. Over four days, a total of 164 visits were recorded. Key findings from the survey included that:

- Visitor numbers were understandably higher at the weekend than on a weekday;
- The majority of people interviewed were day visitors rather than people visiting as part of a wider holiday;
- The majority of visitors on both weekdays and weekends were from within a twenty-minute drive time (the majority of visitors to the Folkestone to Etchinghill Escarpment SAC were primarily from Folkestone and surrounding settlements, whilst the majority of visitors to the Wye and Crundale Downs SAC were from the towns of Ashford and Wye);
- Reasons for people choosing these locations to visit included proximity to home, the variety of footpaths and tracks available, and the quality of the scenery; and
- Walking and dog walking formed the principal activities undertaken at both locations.

6.3.13 1.1.1 A visitor survey undertaken by the AONB Unit identified that the main motivations for visiting the Kent Downs are for its beauty and tranquillity, with walking being the main activity (Kent Downs AONB unit, 2013).

The Dungeness complex (SPA, SAC and Ramsar)

~~6.3.14~~6.3.12 The Dungeness complex (including Romney Marsh and Rye Bay) is designated as SPA, Ramsar and SAC. The area receives a high number of visitors – approximately 550,000 visits are made per annum, with the RSPB reserve receiving approximately 26,000 visitors in 2016 (The Places Team 2017).

~~6.3.15~~6.3.13 The HRA prepared for the Core Strategies of Rother and Shepway Districts (URS 2011) identified that, for the Dungeness complex, approximately 33% of visitors lived more than 80km distant (i.e. outside Kent and East Sussex altogether with the largest single source in this zone being London, responsible for 5% of all visits). The remaining 66% of visitors were dispersed across an area of up to 50 miles/80km covering virtually all of Kent and East Sussex. Less than 10% of surveyed visitors to Dungeness actually came from the 'local' area (up to 16km from the site).

~~6.3.16~~6.3.14 More recent visitor information is available as part of the SARMS prepared for Shepway and Rother District Councils in 2017, which included a Phase One Visitor Survey as part of its supporting information. The SARMS divides the Dungeness complex into six sub-areas, with key findings summarised as follows in relation to visitor numbers and profile (The Places Team 2017):

- **Pett Level and Pannel Valley** – visitor numbers in this area are likely to be low; whilst there is no data currently on visitor profile / origin, there are several caravan and mobile home sites in the area.
- **Rye Harbour Nature Reserve** – around 300,000 visitors per year to the Rye Harbour area, including a mixture of holiday makers, wildlife watchers and day visitors. Just under a third of visitors surveyed as part of the Phase One Visitor Survey (conducted as part of the SARMS) travel more than 55km to the site; nearly two-thirds of visitors are either first-time visitors or visit less than once a month.
- **Camber and Broomhill** – a highly visited area, particularly during the summer. A high percentage of first-time visitors (44%) and the highest number of visitors on holiday out of the six sub-areas. A high proportion of visitors travel long distances, reflecting the area's national profile as a destination. A popular daytrip destination from within the south-east region.
- **Dungeness** – national profile and honeypot destination. The Phase One Visitor Survey found that 40% of visitors were there for the first time, 43% visit less than once per month and 6% visit at least once a week (SARMS 2017). Most visitors had travelled more than 55km (61%).
- **Romney and Lade Foreshore** – car park data showed visitor numbers to be in the region of 26,500 in 2016 but the SARMS acknowledges this is likely to be an under-estimate due to how the sub-area is accessed. Both Greatstone and Lade received the highest percentage of regular visitors within the sub-area; it is noted that Greatstone attracts visitors from a smaller catchment than other sites (49% of respondents travelling less than 5km).
- **Romney Marsh** – little is known about visitors to this sub-area, which includes few accommodation providers or attractions. Visitor activities are thought to relate mainly to walking and cycling.

~~6.3.17~~ The Phase One Visitor Survey for the SARMS also highlighted that the most regular visitors to sites within the Dungeness complex live in Shepway or Rother District, with a high proportion living within a distance of 20km. Other points to note are that there is a high proportion of dog-walkers among regular visitors. Levels of outdoor recreation is highlighted as increasing nationally and that the coast is a particular draw for visitors, often in preference to local sites. The SARMS highlighted that in this area visitor numbers are also increasing

generally both as a result of niche recreational offers (such as kite surfing) and improved accessibility.

Dover to Kingsdown Cliffs SAC

6.3.15

6.3.18 The Dover to Kingsdown Cliffs SAC is a long and narrow site, designated as a SAC for its calcareous grassland, for which low levels of trampling (as a result of recreational activity) are required to maintain site integrity. The site is sensitive to nutrient enrichment arising from dog fouling. Part of the SAC falls within the ownership of the National Trust, with the remainder being in private ownership and not publicly accessible (URS 2012). Visitor surveys for other chalk grassland SAC's in Kent have identified that the core catchment for local visitors (the area from within which 75% of local visitors arose) was up to approximately 4km. It seems probable that Dover to Kingsdown Cliffs will have a similar catchment regarding usage by local residents (Dover District Council 2010).

Impacts of Covid-19 on Recreation

6.3.19 Other issues of relevance here relate to research undertaken into the impacts of Covid-19 on levels of recreation and usage of green space, which has shown changes in the way people interact with the outdoors as well as changes in people's perceptions of nature (ONS 2021). Survey data drawn from the People and Nature Survey for England gathers information on people's experiences and views about the natural environment. During April to June 2020, people were getting outside more often than usual with 40% of adults reporting that they had spent more time outside since the coronavirus restrictions began and 31% were exercising more in outdoor spaces. Over these three months, 58% of the adult population had visited a natural space in the last 14 days. The main reasons people gave for visiting natural spaces were for fresh air, physical and mental health, and to connect with wildlife/nature.

Recreational impact assessment

Potential areas of impact

6.3.201.1.1 The estimated new population of Otterpool Park, once fully built out, is in the region of 20,400 people (based on 8,500 households and a household density of 2.4 people per dwelling) with the potential to increase to 10,000 homes post Development build out. The actual population increase to the area is likely to be lower (for example a proportion of the new population are likely to already live in the district, coupled with the fact that household sizes may be lower than has been the case historically). The total population also includes young children / the elderly / people who may not be sufficiently mobile to access the wider countryside.

6.3.211.1.1 As well as additional recreational pressure from populations once the proposed Development is fully built out, there is the potential for short-term additional pressure on designated sites during the construction and early occupation phases of the proposed Development.

6.3.22 Potential impacts also arise from the types of recreation being undertaken, with activities such as dogwalking potentially causing disturbance to wildlife. Nationally, approximately 26% of households own a dog (and this figure is known to have increased during recent coronavirus restrictions). For the proposed Development a 26% dog ownership rate would translate into approximately 2,000 dog-owning households (although in reality this figure may be lower as dog-ownership will also depend on accommodation type (houses / flats). Other potential impacts of relevance to designated sites include trampling and general disturbance.

Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC

6.3.231.1.1 Visitor surveys undertaken by Arcadis at locations along the Folkestone to Etchinghill Escarpment SAC, and at the Wye and Crundale Downs SAC identified that a significant proportion of people use particular walking routes because of the proximity to their home and/or within 20 minutes maximum drive time. The areas most likely to be affected by the new population living at Otterpool Park are therefore likely to be those nearest to the proposed Development, for example the Lympne Escarpment SSSI which is 300m south of the proposed Development, rather than the environmentally sensitive areas identified in this HRA. Dog walking was the principal activity undertaken at both Sites in the National Sites Network.

6.3.241.1.1 The proposed Development includes a large proportion of publicly accessible open space and high-quality green infrastructure (over 50%), including parks, landscape areas and habitats. The incorporation of green infrastructure, open space and a variety of habitats and landscapes forms an intrinsic part of the design of Otterpool Park, as set out in the Green Infrastructure Strategy (ES Appendix 4.11). Planned green infrastructure includes:

- a variety of woodlands, wetlands, meadows, allotments, recreation areas all connected by green corridors with retained trees, hedgerows and water courses;
- a landscaped green open space to create a setting for Westenhanger Castle;
- creation of a Woodland Country Park on the upper slopes of the site between Harringe Brook Woods, Otterpool Manor and Upper Otterpool Farm;
- use of the East Stour River corridor to incorporate both formal and informal walking and cycling routes connecting areas of open space and leisure / sports provision; and
- creation of a landscape buffer between the proposed Development and the village of Lympne, with opportunities here for informal recreation, walking and horse-riding.

6.3.251.1.1 Green movement corridors have been designed to enable people to access open spaces in the wider landscape in the vicinity of Otterpool Park. Corridors provide access to off-site footpaths and spaces in the surrounding areas, including north towards Sellindge, west along the East Stour River, south towards Lympne and to footpaths that lead to the woodlands and parkland to the east of the site. The design takes into account the sensitivity of these areas and places and discourages high levels of access where recreational pressure may have an adverse impact.

6.3.261.1.1 It is therefore likely that a significant proportion of those seeking recreational activity including dogwalkers in particular, will utilise the spaces and routes within the proposed Development for regular activities.

6.3.27 The Green Infrastructure Strategy (ES Appendix 4.11) prepared for the proposed Development identifies a phased approach for green infrastructure as part of development proposals. National green infrastructure guidance (including Natural England's publication NE176) recommends where possible that structural planting proposals are implemented in advance of the construction of built development. In addition to other benefits, this approach can help mitigate construction-related effects, allow distinct character areas within the proposed Development to evolve more quickly and deliver health, wellbeing and recreational resources for the emerging community. There is also an opportunity for the use of 'meanwhile spaces' to provide additional green infrastructure areas during the construction phase. Further proposals are for the town park to the south of Westenhanger Castle to be developed in the first five years of the proposed Development, thus benefitting 'early occupiers'. As such it is not considered that there would be an unacceptable increase in recreational pressure on the Folkestone to Etchinghill Escarpment SAC or Wye and Crundale Downs SAC during the early stages of the development.

Dungeness Complex

6.3.286.3.16 Visitor surveys highlighted that most regular visitors to sites within the Dungeness complex live in Shepway or Rother District, with a high proportion of regular visitors living within

20km. However, there is much variation as to how sites within the complex are used and the visitor profiles associated with each; sub-areas with the highest level of recreational pressure are Camber and Broomhill, Rye Harbour and the Romney and Lade Foreshore areas. The visitor surveys also identify a range of visitor activities taking place across the six sub-areas, including birdwatching, walking, cycling and beach-based activities. Dogwalking was noted as a regular activity across much of the Dungeness complex. Evidence seems to suggest that regular dog walking is an activity that takes place within close proximity to place of residence – Greatstone within the Dungeness complex is a good example here, where the majority of visitors citing dog walking as the primary purpose for their visit (58%) were from within a 5km radius (The Places Team 2017).

~~6.3.29~~6.3.17 The purpose of the SARMS is to address recreational pressure experienced at the Dungeness complex and provide a strategic, cross-boundary approach to issues relating to disturbance. It should be noted that the SARMS is required in relation to the Local Plan for Folkestone and Hythe District Council and is therefore not mitigation relating directly to this HRA. The strategy aims to 'ensure that any increases in access and recreational usage resulting from the planning policies of either Council (F&HDC or Rother District Council) do not adversely impact on the integrity of these internationally important wildlife sites and proposes supporting actions to ensure sensitive management of recreation and access'. The strategy states that regard should be had to increases in visitors which may occur as a result of 'substantial population growth' within the main catchment area. ~~Mitigation measures~~Measures outlined in the SARMS relate to:

- Ongoing / regular visitor surveys in order to monitor visitor numbers and profile (including activities and season of visit) with site specific programmes at certain locations within the complex;
- A programme of visitor education to raise awareness of the importance of the Dungeness complex and appropriate behaviours for visitors to it; and
- Measures around access control and enforcement.

~~6.3.30~~6.3.18 The probable increase in visitors to the Dungeness complex as a result of the potential population increase in Shepway could be expected to be approximately 5% (note that the HRA prepared for the Core Strategies of Rother and Shepway Districts in 2011 estimated 8,000 new dwellings (including those provided within Otterpool), however the additional dwellings would be unlikely to affect this approximate estimate). This also assumes that all of the proposed Development's residents will be new to the area which is unlikely. Survey data suggests that proximity to site is an important factor for recreational users; the draw of the coast however has also been noted within the SARMS. It is considered that although there is likely to be an increase in visitors as a result of the proposed Development, this is capable of being ~~mitigated~~managed by the actions and recommendations proposed ~~for visitor management~~ generally within the SARMS, for example visitor education and awareness raising measures focusing on potential adverse impacts arising from trampling, littering and disturbance. The SARMS is initiated and already secured in response to Local Planning policy and is therefore not specific mitigation for the Otterpool Park development. The scope for ongoing monitoring of visitor numbers provides additional reassurance, particularly in light of evidence around increasing visitor numbers over time as a result of factors described earlier (including niche recreational offers, increased accessibility and an increase in appreciation of the outdoors and nature as a result of the coronavirus restrictions).

~~6.3.31~~6.3.19 As stated earlier, the proposed Development includes a large proportion of publicly accessible open space and high quality green infrastructure (over 50%) which is integral to the development. The design of green and open spaces within the proposed Development will include provision of recreational space for ~~dogwalking~~dog walking. Natural England recommendations are for 8ha per 1,000 people for ~~dogwalking~~dog walking provision in sites where Suitable Alternative

Natural Green Spaces (SANGs) are required; this would be supported at Otterpool Park by a commitment to a community engagement and ownership code.

6.3.326.3.20 It is therefore likely that a significant proportion of residents of Otterpool Park seeking recreational activity (including dogwalkingdog walking in particular) will utilise the spaces and routes within the proposed Development for regular activities and therefore limit impacts to sites on the National Sites Register such as the Dungeness Complex. As such, it is not considered that there is potential for a likely significant effect resulting from recreational pressure.

Dover to Kingsdown Cliffs SAC

6.3.336.3.21 The Dover to Kingsdown Cliffs SAC is a long and narrow site, designated as a SAC for its calcareous grassland, for which low levels of trampling (as a result of recreational activity) are required to maintain site integrity. The site is sensitive to nutrient enrichment arising from dog fouling. Part of the SAC falls within the ownership of the National Trust, with the remainder being in private ownership and not publicly accessible (URS 2012). The assessment of potential recreational impacts upon this site were primarily based upon data collected by URS to inform the HRA for the Core Strategy in 2012. Population projection data obtained by Shepway Council (now F&HDC) from Kent County Council since the original HRA reported in URS (URS 2012) was undertaken identifies that a 10.1% population increase is expected in the Shepway urban area (from which most visitors to Dover to Kingsdown Cliffs SAC originating in Shepway can be expected to arise) (Strategic Housing Market Assessment, 2017). If one assumes that a 10.1% increase in the population of the urban area will likely result in a 10.1% increase in Shepway's contribution to SAC visitors then that means a further 1,632 visitors per annum or an increase in pressure of 0.7% due to Shepway, i.e. extremely small. This confirms (based on actual visitor survey data) that while an increased population in Shepway probably willShepway Core Strategy in 2012. This identified that, whilst an increased population in Shepway (now F&HDC) probably would result in more visits to the SAC, the core catchment of the SAC with regard to local residents is essentially the Dover town area, and the increase from the proposed Otterpool Park development is not considered to be significant.

6.3.22 Visitor surveys for other chalk grassland SAC's in Kent have identified that the core catchment for local visitors (the area from within which 75% of local visitors arose) was up to approximately 4km. It seems probable that Dover to Kingsdown Cliffs will have a similar catchment regarding usage by local residents (Dover District Council 2010).The This approach is similarly followed in the Draft Dover District Local Plan (Reg 18) HRA (LUC, 2021), which applies a Zone of Influence of 4km from the Dover to Kingsdown Cliffs SAC. Reference is also made to key components of the current management regime to encourage walkers (and particularly dogwalkers) to follow specific measures to minimise impact on the environment.

6.3.34 Due to the distance of the SAC from the proposed Development includes a large proportion of publicly accessible open space and high-quality green infrastructure (50%) which is integral to the development. This includes parks, landscape and habitats, as described above.

6.3.356.3.23 It is therefore, together with the site's existing management regime, it is not considered that there is potential for a likely that a significant proportion of those seekingeffect resulting from recreational activity including dogwalkers in particular, will utilise the spaces and routes within the proposed Development for regular activities. pressure.

Conclusion

6.3.366.3.24 Eighteen sites were identified within 30km of the proposed Development. Of these:

- Four sites were scoped out due to there being no existing recreational vulnerabilities identified (Blean Complex SAC, Stodmarsh SPA, Stodmarsh SAC and Stodmarsh Ramsar Site).

- Tankerton Slopes and Swalecliffe SAC was scoped out of any ~~potentially~~likely significant effect due to absence of stakeholder concerns together with distance from the proposed Development.
- Parkgate Down SAC, whilst being located within 10km of the proposed Development, is not accessible to the public and no likely significant ~~effects were~~effect has been identified.
- Six sites were identified as having existing recreational vulnerabilities, however all six sites are over 15km from the site, with five being over 20km distant. ~~Given the likely behaviour of the residents of the proposed Development these~~ These sites are likely to be too far away from the proposed Development to attract any significant numbers of visitors~~.~~ (given research evidence suggests that 75% of visitors to a site come from within a 4km travel distance). These sites were also not highlighted as being of particular concern by stakeholders including NE and there is considered to be no pathway for likely significant effects.
    - ~~Six~~A further six sites were highlighted as being of particular stakeholder concern. Of these, further review has been undertaken in terms of visitor numbers and ~~were taken forward for assessment. This identified that the~~travel patterns. A desktop review of visitor information relating to the Dungeness Complex (three sites ~~may experience a slight increase~~), together with visitor management measures set out in the ~~number of users from~~SARMS and the nature of the open space and green infrastructure facilities provided within the proposed Development~~, primarily the Folkestone to Etchinghill Escarpment~~ has led to a conclusion that there would be no likely significant effect on the sites as a result of recreational pressure. The Dover to Kingsdown Cliffs SAC ~~which~~ is located just over ~~4km away and the Dungeness complex, however the relatively small number of additional users is not considered to be significant. Visits for dog walking are less likely due~~20km to the north of the proposed Development ~~inclusion of a significant portion of accessible green space for recreation including dog walking and the behaviour derived from surveys which indicate~~; this fact, together with the site's existing management regime and again the recreational opportunities provided as part of the proposed Development, have led to a conclusion that ~~proximity is a primary factor in dog walking. In conclusion,~~ there would be no likely significant ~~effects are anticipated to the integrity of the sites nor any of their qualifying features and recreational impacts are scoped out of the assessment.~~

~~6.3.37~~~~• In summary,~~effect on the ~~HRA identifies that proposals are not likely to have a significant effect on the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC through recreational pressure. The conclusions have been informed both by baseline evidence, notably visitor surveys undertaken at these sites, together with changing behaviours in relation to open space and the needs of the population. For example, the HRA describes the changing ways in which people interact with the outdoors since the Covid-19 pandemic in addition to the different needs that people have – whether this be for dog walking, exercising, or being 'in nature'. People experience outdoor spaces for a variety of purposes is important and means that future residents of the proposed Development are likely to visit different types of spaces to fulfil different needs, particularly those in proximity to their home. Areas such as the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC form one type of space amongst many. Other factors that have informed the conclusions include the distance of the sites from the proposed Development. The conclusions that no likely significant effects are anticipated is founded on these factors, together with the multiplicity of alternative outdoor spaces that are provided either as part of the proposed Development or in its vicinity. The requirement for the preparation of an access strategy serves as a further measure by which these areas can be monitored and protected. Further engagement with Natural England about the content of the access strategy would be welcomed at a later stage in the design, for example when further detail is available at~~

~~Tier 2. ; i.e. in line with Natural England's recommendation "that the Otterpool Park application revisits the potential for recreational impacts at the detailed design stage".~~site as a result of recreational pressure.

- Two sites – the Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC – have been taken forward to the Appropriate Assessment stage, set out in Section 8.

6.4 Water Pollution Assessment (Screening - Stage 1)

Potential impacts and effects from poor water quality

6.4.1 Increased inputs of nutrients into the Stour catchment from the proposed Development has the potential to lead to degradation of the wetland habitats upon which the qualifying features rely. Habitats associated with Stodmarsh SAC, SPA and Ramsar comprise open water bodies (standing water and running water), reedbeds, grazing marsh and alder carr.

6.4.2 The River Stour feeds into the Stodmarsh designated sites. The river is vulnerable to receipt of increased nutrients via direct input from wastewater treatment works and drainage/surface runoff. With regard to the proposed Development, wastewater from new development is considered to be the primary issue of concern.

Impact assessment

6.4.3 Habitat of note in relation to the qualifying feature of Stodmarsh SAC (Desmoulin's whorl snail) comprise ditches within pasture on the floodplain of the River Stour. Degradation of water quality associated with the river has potential to enter the ditch system and alter the hydrological (calcareous) conditions of the habitat upon which this snail is highly dependent upon.

6.4.4 The qualifying features of the SPA and Ramsar designations comprise important bird species and assemblages, and uncommon invertebrates and plants associated with wetland habitats. Again, degradation of water quality and supporting habitat for these species, has the potential for significant effects to occur.

6.4.5 Nutrient budget calculations have been undertaken for the proposed Development to determine the requirement for mitigation with regards to nutrient neutrality, in accordance with Natural England's Nutrient Neutrality Generic Methodology (February 2022), Stodmarsh SAC Nutrient Budget Calculator (March 2022), and Stodmarsh SAC Guidance ~~Note (November, 2020~~Document Version 1 (March 2022). The precautionary calculation has determined that in order for nutrient neutrality to be achieved for the proposed Otterpool Park Framework Masterplan (the OPA area and additional development within the wider Otterpool Framework Masterplan area), and Sellindge Phase 2 Sites (CSD9A and CSD9B – two sites located adjacent to Sellindge – full details in ES Chapter 2) mitigation is required in the form of new onsite wetland habitat (the area of which is required to be ~~between 23.9ha and 24.9ha~~ up to 35.65ha) and 35ha of new woodland to offset the projected nutrient burden, in conjunction with a new state of art onsite Wastewater Treatment Works (WwTW)This includes a minimum of ~~11.7ha~~12.05ha of wetland area to remove the nutrients from wastewater discharges suitably located near to the proposed onsite WwTW at the north-western portion of the proposed Development. However, only ~~8.8ha~~9.45ha of new wetland is required to achieve the nutrient neutrality from the extra wastewater discharges from the current Tier 1 Outline Planning Application, along with ~~11.9ha~~121.19ha of new stormwater wetland (i.e. a total wetland area of 30.64ha) and 35ha of new woodland. As on-site mitigation is required, in line with CJEU C-323/17 People Over Wind and Peter Sweetman vs Coillte Teoranta, this impact to the Stodmarsh SAC SPA and Ramsar Site is carried forward to HRA Stage 2 – Appropriate Assessment. This is reported in Section 8 of this report.

6.4.6 The above wetland area requirements have been estimated based on the published median removal rates (by M Land et al, 2016) for Total Nitrogen (93 g/m^2/yr) and Total Phosphorus (1.2

g/m^2/yr), which NE also agreed upon in their Discretionary Advice Service letter of the 01 June 2021 (NE reference 11529/350700) so that greater level of detail of the proposed mitigation wetlands can be provided in future related reserved matters applications. The NE also confirmed their agreement in principle to this approach during a meeting held on 01/02/2023, so that their specific requirements for future detailed assessments, and associated implementation and monitoring requirements should be secured via a suitable planning condition at subsequent tiers of planning approval, including reserved matters applications and planning conditions.

Conclusions

~~6.4.6~~6.4.7 Natural England's current advice with regards to any proposed Development project of this nature within the Stour catchment is that mitigation needs to be implemented in order to achieve nutrient neutrality; this has further been confirmed through undertaking project nutrient budget calculations. In accordance with current guidance and case law, mitigation cannot be considered as part of the HRA at the screening stage. Therefore, in the absence of mitigation, the proposed Development has the potential to lead to likely significant effects in relation to Stodmarsh SAC, SPA and Ramsar associated with water quality. As on-site mitigation is required, in line with CJEU C-323/17 People Over Wind and Peter Sweetman vs Coillte Teoranta, this impact to the Stodmarsh SAC SPA and Ramsar Site is carried forward to HRA Stage 2 – Appropriate Assessment. This is reported in Section 8 of this report.

~~7~~ Screening of In-combination Effects

7.1.1 A review of the Local Plan HRAs, namely the F&HDC Places and Policies Local Plan (PPLP) and Core Strategy Review (LUC 2018) was carried out to assess other plans and projects which could lead to likely significant effects on Sites in the National Sites Network when considered in combination with the proposed Development.

7.2 In combination effects relating to Functionally Linked Land

7.2.1 As the conclusion of the screening was that the Proposed Development site has no evident functional link to the designated sites, there is no pathway for in-combination effects. Therefore, no in combination effects are anticipated from this pathway and as such will not be carried forward into the Appropriate Assessment.

~~7.1.2~~ Air Quality~~Most policies and potential sources of impact were ruled out at the Screening Stage of the F&HDC PPLP, assuming implementation of safeguards and specific mitigation for recreational and air quality impacts. For recreational impacts this included project level HRA assessment (where appropriate), completion of a visitor study, monitoring and provision of green infrastructure. For air quality impacts this included a commitment to monitoring NOx along the A20 road, over the People and Places Local Plan (PPLP) period, to track projected improvements in air quality.~~

7.3 ~~As~~

7.3.1 The air quality assessment presented in the ES includes an assessment of the in-combination effects of the proposed scheme on the SAC.

7.3.2 The with and without proposed Development scenarios all committed/planned developments (including a number in neighbouring local authorities) and traffic growth factors according to TEMPro, the assessment is inherently cumulative. Appendix 16.4 of the Environmental Statement provides detail on the developments and methodology with regards to projecting future growth in the traffic model, with the methodology being agreed in conjunction with Kent Country Council and National Highways.

7.3.3 As the development will open in phases, three future assessment years (2024, 2030, and 2044) were assessed in the air quality chapter of the ES. The impact of the proposed Development on nitrogen deposition was assessed in-combination in each year against a without proposed Development scenario. For example, the traffic impact associated with the full build out of the proposed Development was assessed against the scenario in 2044 where there was no proposed Development (and therefore did not assess the proposed Development and traffic changes incrementally between 2030 and 2044).

7.3.4 In addition, there were no other developments such as non-road (industrial or agricultural) that could cause additional increases in combination with the proposed development, that were required to be included in the assessment.

7.3.5 With regards to air quality, all sites have been screened out with the exception of Folkestone to Etchinghill Escarpment SAC, which is taken forward to Appropriate Assessment.

7.4 Public Access / Recreational Disturbance

~~7.1.3~~7.4.1 Within the local plan HRA for Folkestone and Hythe District Council, potential likely significant effects could not be ruled out at the Screening Stage for recreational impacts to adversely affect qualifying features of the Dungeness Complex (which includes the SAC, SPA and Ramsar), the issues were further assessed in an Appropriate Assessment. Assuming implementation of the mitigation policies built into the PPLP and the successful delivery of recommendations detailed within the Dungeness Complex - Sustainable Access and Recreation Management Strategy (SARMS) (Prepared for F&HDC and Rother District Council, 2017) the Appropriate Assessment concluded that the F&HDC PPLP would not results in adverse effects on the Dungeness Complex or other Sites in the National Sites Network either alone or in-combination. It should be noted that the SARMS is required in relation to the local plan for Folkestone and Hythe District Council and is therefore not mitigation relating directly to this HRA.

~~7.1.4~~7.4.2 The F&HDC Core Strategy Review HRA reviewed the changes to policies since the 2013 Core Strategy, which included policies specific to the proposed Development, namely Policy SS6 (New Garden Settlement – Development Requirements), Policy SS7 (New Garden Settlement – Place Shaping Principles), Policy SS9 (New Garden Settlement – Sustainability and Healthy New Town Principles) and Policy SS9 (New Garden Settlement – Infrastructure, Delivery and Management). As a result of the screening assessment, Policy SS6 was considered to potentially result in a likely significant effect on Sites in the National Sites Network.

~~7.1.5~~7.4.3 However, with the implementation of the potential mitigation/avoidance measures (including the delivery of the overarching SARMS, the likelihood of impacts being limited by distance to Sites in the National Sites Network, existing site management, provision of natural greenspace as part of the masterplan and updated air quality assessment and precautionary measures to be included in Core Strategy), the conclusions reached in the F&HDC Core Strategy Review HRA, were that there would be no likely significant effect on Sites in the National Sites Network as a result of the F&HDC Core Strategy Review, either alone or in-combination.

7.4.4 With regards to recreational disturbance, all sites have been screened out with the exception of Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC, which are taken forward to Appropriate Assessment.

7.5 Nutrient Neutrality

~~7.1.6~~7.5.1 Natural England's current advice with regards to any proposed Development project of this nature within the Stour catchment is that mitigation needs to be implemented in order to achieve nutrient neutrality. Without this, there is considered to be the potential for significant effects to occur in relation to the proposed Development in combination with other schemes in the region in terms of water quality in relation to Stodmarsh SAC, SPA and Ramsar.

~~7.1.7~~7.5.2 As outlined in section 8 below (the Appropriate Assessment), the on-site mitigation to achieve the nutrient neutrality relies on no change in loadings from the proposed Otterpool Development, and demonstrates that this is achievable. As such, the proposed Development will have no additional impact beyond the baseline state once this is implemented, and therefore there is no potential for ~~a cumulative impact. As such, the assessment of in-combination effects does not need to include an assessment of water quality impacts upon the Stodmarsh SPA, SAC and Ramsar site~~an in combination effect.

7.5.3 The proposed development will be nutrient neutral (as evidenced in the Appropriate Assessment ~~(Stodmarsh SAC, SPA)~~ and ~~Ramsar~~therefore there is no pathway for in-combination impacts.

~~8~~ Appropriate Assessment (Stage 2)

8.1 Water Pollution / Nutrient Neutrality

Potential impacts and effects from poor water quality

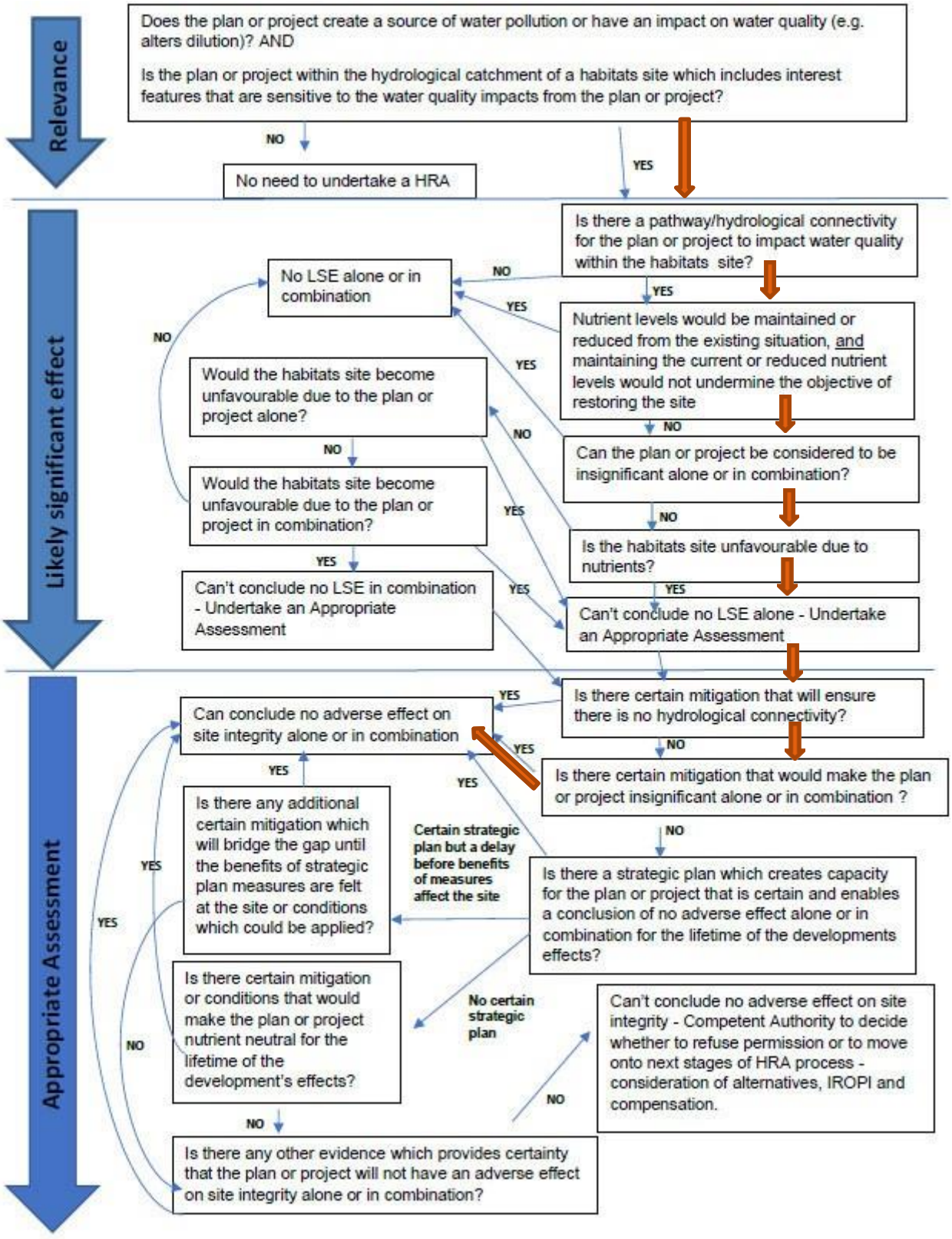
8.1.1 Increased inputs of nutrients into the Stour catchment from the proposed Development has the potential to lead to degradation of the wetland habitats upon which the qualifying features rely on. Habitats associated with Stodmarsh SAC, SPA and Ramsar comprise open water bodies (standing water and running water), reedbeds, grazing marsh and alder carr.

8.1.2 The River Stour feeds into the Stodmarsh designated sites. The river is vulnerable to receipt of increased nutrients via direct input from wastewater treatment works and drainage/surface runoff. With

regard to the proposed Development, wastewater from new development is considered to be the primary route of concern.

8.1.3 This approach, and the requirement for this Appropriate Assessment is illustrated in Image 3, taken from Natural England's 'Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impacts on habitats sites' (Natural England 2022).

Image 3: Approach to addressing Nutrient Neutrality in relation to this Plan / Project (project response in orange)



Assessment

8.1.4 In the absence of mitigation, there is potential for changes in nutrient levels to impact the designated site. However, as a component of the design of the development, on-site mitigation has been outlined that will ensure that the development is nutrient neutral. The full details of the onsite mitigation to ensure that nutrient neutrality can be achieved are presented in the Water Cycle Study (ES Appendix 15.2) and Appendix L, a summary is presented below (extracted from the Executive Summary of Water Cycle Study):

8.1.5 "Wastewater in the District is currently collected and treated by Southern Water (SW). There are two potential offsite treatment options for the proposed Development to discharge. This would be either to the nearby Sellindge Wastewater Treatment Works (WwTW) approximately 1km to the west or West Hythe WwTW in the adjoining catchment, approximately 7km to the southeast. SW has completed a feasibility study to identify what additional wastewater infrastructure upgrades would be required to serve the proposed Development at their preferred Sellindge WwTW. This feasibility study confirmed that a new rising main and major upgrade to the existing works will be required in a phased manner. SW has not identified any fundamental reasons why development should not go ahead as the required new infrastructure can be delivered through the water industry's five-yearly business planning process to match with the proposed Development trajectory and phasing plans at Otterpool Park. The current Asset Management Plan (AMP7), which covers the period 2020 to 2025 has already made the necessary provisions to undertake the required detailed investigations and initial infrastructure upgrades to accommodate Otterpool Park. As part of this, a Risk and Value exercise is currently underway by SW.

8.1.6 However, Sellindge WwTW and other WwTWs that are discharging into the River Stour and surroundings are currently also subject to a separate detailed investigation in connection with their potential negative impacts on the Stodmarsh European designated sites under the Environment Agency's (EA's) Water Industry National Environment Programme (WINEP) that will report in 2022. This WINEP investigation has been initiated to investigate potential links between the River Stour and the Stodmarsh lakes systems, then propose appropriate, possible and cost-effective solutions to resolve any identified impacts. Until this WINEP study is complete, including any mitigation solutions are fully implemented (i.e., if deemed required) all new development in the impacted Stour catchment must achieve nutrient neutrality as per the latest Natural England's (NEs) guidance for Stodmarsh sites. Therefore, it is currently proposed that the initial development phases will be served by a dedicated onsite WwTW with suitable additional onsite nutrient neutrality mitigation. This will include constructed wetlands and woodland planting to offset surplus Nitrogen and Phosphorous, due to the wastewater and surface water discharges from the proposed Development. This approach has been agreed with NE and the EA in principle so that Otterpool Park will ensure nutrient neutrality, as per the required precautionary principle to protect the integrity of the downstream Stodmarsh SPA SAC and Ramsar site.

8.1.7 The onsite WwTW will be located within the application site boundary towards the northwest corner and two options have been identified for the final treated effluent discharge outfall location, one upstream location on the River East Stour near to the onsite WwTW and a second further downstream location on the same watercourse near to the Sellindge WwTW. The latest discussions with Severn Trent Connect (STC), who has been identified as the New Appointment and Variation (NAV) for Otterpool Park, indicate that providing onsite works to achieve both the nutrient neutrality and the EA's proposed discharge permits are viable. The modular onsite WwTW will be constructed and commissioned in four main phases to match with the proposed Development trajectory. This phased approach will also ensure the flexibility to connect the later development phases of the Otterpool Framework Masterplan Area to Sellindge WwTW, if deemed required following the implementation of ongoing WINEP study recommendations.

8.1.8 A new appointment is made where a limited company is appointed by Ofwat to provide water and/or sewerage services. A NAV, therefore, involves one company replacing another as the appointee for a specific geographic area. In line with the current EA legislation and policies, new discharges should first consider connecting to existing infrastructure, where reasonable although as stated above

this is currently not viable due to the ongoing WINEP study and the limited capacity currently available within the existing network and Sellindge WwTW."

8.1.9 The WCS produced in support of the ES (as updated through the Nutrient Budget provided in Appendix L) fully details how the above mitigation requirements will be met at the Otterpool Park at Tier 1 OPA and Otterpool Framework Masterplan Area, including the preliminary designs undertaken to date. Sufficient amount of wastewater treatment wetlands and stormwater treatment wetlands have been strategically located within the relevant wastewater and stormwater catchments. Further refinements to the nutrient budgets and detailed mitigation designs (including wetland designs, supporting hydraulic calculations and maintenance plans) will be undertaken as the project moves to the detailed design stage at Tier 2 and Tier 3 stages, through the implementation of suitable planning conditions.

8.1.10 The report presented in Appendix L provides the latest nutrient budget calculations and associated mitigation proposals to demonstrate that Nutrient Neutrality can be achieved at the Proposed Development as part of Otterpool Park OPA, including the remaining FMP. This is through the provision of a new Onsite WwTW serving the proposed development, accompanied by the proposed four interlinked constructed wetlands system, which will protect the integrity of the downstream Stodmarsh designated sites. Thereby, the updated development proposals and this report demonstrate that they can meet the required key tests under the Habitats Regulation Assessment, which are based on average household occupancy rate of 2.4, Per Capita Consumption (PCC) rate of 120 l/p/d, 90% of discharge permit values (i.e. 90% of TP limit of 0.1 mg/l and TN limit of 7.2 mg/l) for the proposed Severn Trent Connect Onsite WwTW option as well as the latest NE methodology for land use nutrient budget assessment:

8.1.11 Nutrient Neutrality at Otterpool Park will be achieved by the implementation of the measures previously identified in Arcadis (March 2022) OP5 – Appendix 15.2 – Water Cycle Study, which have been now updated by this report to include the following:

- Direct treatment mitigation with the proposed Severn Trent Connect Onsite WwTW option
- Direct mitigation, which includes up to 35.~~68~~65 ha of onsite wastewater and stormwater wetlands, including 35ha of new onsite woodland planting
- Indirect mitigation, which includes changing existing agricultural land use to a lower nutrient use, such as stormwater SuDS, SANG and ecology/landscape mitigation.

8.1.12 The above mitigation will be implemented, as per an agreed and phased implementation plan with NE and the LPA for each development phase or multiple phases. Therefore, this demonstrates that the Proposed Development within the current OPA will have No Likely Significant Effect on Stodmarsh designated sites and thereby can meet the required tests of the Appropriate Assessment under the Habitats Regulation Assessment in respect to the potential nutrients impact.

8.1.13 The detailed mitigation proposals should use the relevant NE's published guidance in place at the time for nutrient neutrality, wetland design and the associated mitigation strategy. Further details of the design, management, maintenance, and monitoring of the mitigation wetlands to be submitted at the reserved matters stage. In addition, bespoke calculations should also be provided for the nutrient removal efficiency of the mitigation wetlands, which should include seasonal hydraulic rates and not just rely on Land et al median wetland efficacies rates. Similarly, additional information should be provided to evidence the farm type and any other land use for the last 10 years.

8.1.14 The detailed design of the wetlands should utilise industry best-practice approaches as per NE's Wetland Mitigation Framework (May 2022) to calculate the nutrient removal and associated wetland area (e.g., The P-K-C* approach, A 'plug flow' model termed the k-C* approach, and Regression equations). NE's current advice is that the wetland designs should use at least two of these approaches, and then the most precautionary calculation should be used to inform the nutrient removal rating of the wetland.

~~8.1.12~~

Effects in Combination with Other Plans and Projects

~~8.1.13~~8.1.15 As the proposed development implements on-site mitigation to address nutrient issues, the Otterpool Park development has no potential to have an effect in combination with other plans and projects.

Conclusions

~~8.1.14~~8.1.16 Natural England's current advice with regard to any proposed Development project of this nature within the Stour catchment is that mitigation needs to be implemented in order to achieve nutrient neutrality; this has further been confirmed through undertaking precautionary project nutrient budget calculations.

~~8.1.15~~8.1.17 Proposals are outlined as a component of the proposed Development that have been agreed in principle with NE and the EA , which would ensure that the site can achieve nutrient neutrality. As it can it be demonstrated that the proposal will not adversely affect the integrity of the site (when the mitigation on site is implemented), no further stages of HRA are required.

8.1.18 It is recommended that measures to secure details of the nutrient neutrality approach are outlined within appropriate planning condition(s), as outlined in paragraphs 8.1.13 and 8.14.

8.2 Air Quality Impacts

8.2.1 Only one site subject to assessment under the Habitats Regulations was screened in for air quality assessment based on being within 200m of the traffic model affected road network, that being the Folkestone to Etchinghill Escarpment SAC.

8.2.2 The Local Plan HRA (Folkestone and Hythe District Council (F&HDC) which included the proposed Development quanta to 2037 and all other development in F&HDC to 2037 as detailed in the Core Strategy Review (LUC, 2018), the F&HDC Places and Policies Local Plan (PPLP) (LUC, 2018) and the Core Strategy Review HRA Addendum (LUC 2019)), concluded no significant adverse effects on the integrity of the site either alone, or in combination with other plans from neighbouring local authorities. These documents underpin the 2020 People and Places Local Plan Review.

8.2.3 Subsequent consultation with Natural England during August 2022 raised queries in relation to nitrogen deposition from road traffic emissions of ammonia (NH_3). The F&HDC Local Plan at the time did not consider the road traffic NH_3 element of nitrogen deposition.

8.2.1 The consideration of NH_3 was later clarified by NE in a letter dated 9th September 2022, as outlined in Appendix N, that this can be assessed at a subsequent stage of the planning process (this application is prepared at Tier 1 with two subsequent Tiers proposed within the planning approach). It was accepted by NE that NH_3 from road emissions is an emerging area of concern, there are no Government issued approved emission factors for NH_3. Assessment of impacts at a later stage is in line with other aspects of Air Quality assessment within the submission, for example it has been secured with FHDC to defer the air quality damage cost assessments to Tier 2/3 (phase-wide masterplanning and reserved matters stages of approval respectively) on a phase-by-phase basis rather than for the entire outline application owing to the uncertainty of predicting so far into the future.

8.2.2 It was outlined in consultation with NE during a meeting in February 2023 that it is appropriate to conduct an Appropriate Assessment of the potential impact of the development based on the results presented in the Environmental Statement (i.e. the results concerning nitrogen deposition from NOx emissions). Applications during later tiers will consider the impact from NH_3, to assess the potential impacts to the site resulting from the project. In addition to the modelling provided in the ES, this HRA also provides further evidence why no significant impact is likely to be assessed at future stages at the Folkestone to Etchinghill Escarpment.

8.2.3 Based upon the agreed methodology (excluding NH_3 at this tier) in the modelled scenario, the projected change in nitrogen deposition (do something vs do minimum) at points within the designation were predicted to be >1% of the Lower Critical Load (LCL) in the 2044 with proposed Development scenario (maximum increase being 1.4% of LCL). As such, the impacts from air quality on Folkestone to Etchinghill Escarpment are progressed to Stage 2 Appropriate Assessment in this report.

8.2.4 The table below shows the modelled change in nitrogen deposition in 2044 (Table 9) on the receptor locations where the change in deposition exceeds 1% of the site relevant lower critical load (when compared to the 'do minimum' future baseline).

Table 9: Modelled locations that exceed the 1% LCL in the 2044 with proposed Development Scenario

Receptor_ID	Woodland/ Grass	Road NO_2 (ug/m3)			Road N Deposition (kg N ha yr)			Bgd N Dep (kg N ha yr)	Total N Deposition (kg N ha yr)				LCL	- %
		Base 2018	DM 2044	DS 2044	Base 2018	DM 2044	DS 2044		Base 2018	DM 2044	DS 2044	change		
FolkstoneEtchB1	Grassland	26.9	9.8	11.1	3.76	1.37	1.55	19.60	23.36	20.97	21.15	0.17	0.15	1.2
Folkstone Etchinghill GRID_621648.62_137909.91	Grassland	27.0	9.8	11.1	3.78	1.37	1.56	19.60	23.38	20.97	21.16	0.18	0.15	1.2
Folkstone Etchinghill GRID_621856.81_138118.02	Grassland	26.0	8.5	9.6	3.64	1.19	1.35	19.60	23.24	20.79	20.95	0.16	0.15	1.1
Folkstone Etchinghill GRID_621797.31_138144.03	Grassland	26.8	9.1	10.4	3.75	1.28	1.45	19.60	23.35	20.88	21.05	0.17	0.15	1.2
Folkstone Etchinghill GRID_621856.81_138144.03	Grassland	31.7	10.4	11.9	4.44	1.46	1.67	19.60	24.04	21.06	21.27	0.21	0.15	1.4
Folkstone Etchinghill GRID_621856.81_138170.03	Grassland	31.7	10.4	11.8	4.44	1.45	1.65	19.60	24.04	21.05	21.25	0.19	0.15	1.3

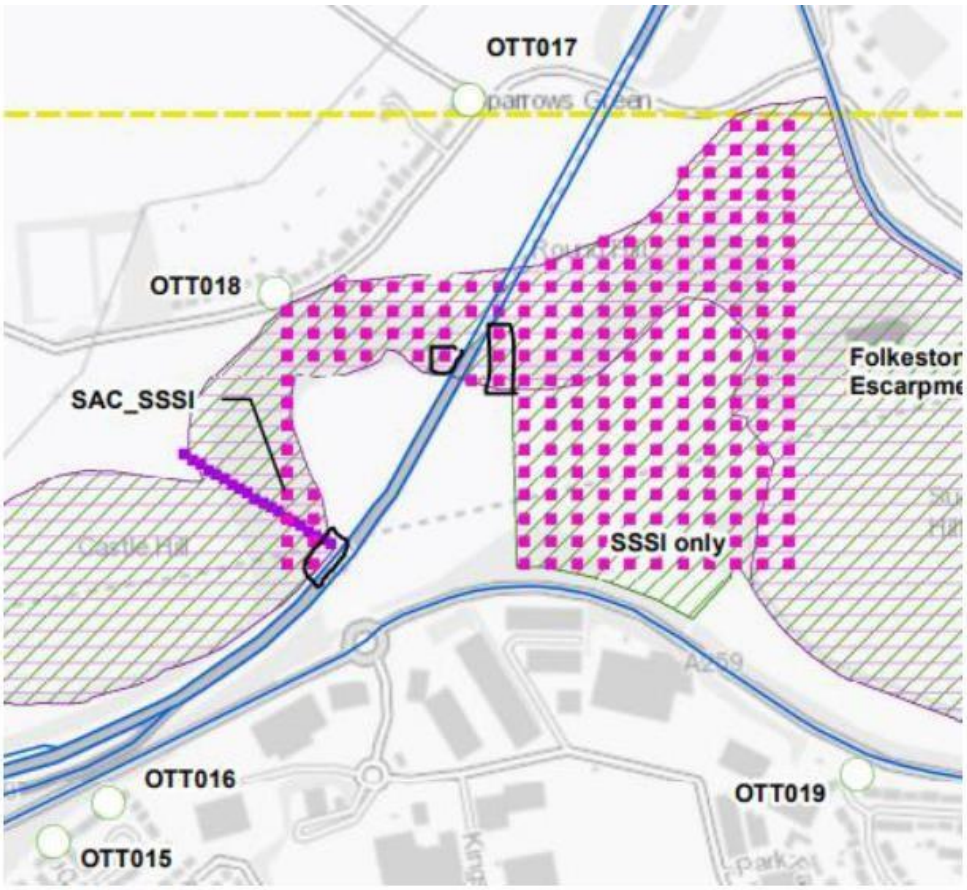
DM = Do-Minimum (without proposed Development scenario)

DS = Do-Something (with proposed Development scenario)

8.2.5 An assessment was made of potential nitrogen deposition impacts to the Folkestone to Etchinghill Escarpment SAC based on gridded output at a 20m resolution. Those points falling on the carriageways of the A20 were removed. Within this assessment, six modelled locations exceeded the 1% LCL threshold (DS vs DM in 2044). These are presented in Image 4.

8.2.6 It should be noted that a change of greater than 1% of the LCL does not mean that the impacts are significant, it serves to identify that additional work is required to determine whether the changes are likely to affect the integrity of the SAC. This approach to screening of the need for Appropriate Assessment is outlined in NE's NEA001 guidance.

Image 4: Locations in Folkestone to Etchinghill Escarpment SAC during DS2044 where Nitrogen deposition loadings increase by more than 1% of LCL



8.2.7 In these locations, the maximum increase in nitrogen deposition was 1.4% of the lower critical level of 15 kg N Ha Yr for the nitrogen sensitive feature of Calcareous Grassland. This is only marginally above the 1% screening level at which impacts could be immediately ruled out without any further assessment.

8.2.8 In the 2044 DS scenario, the projected 2044 deposition with the proposed Development (21.27 kg N ha yr) is lower than the current (2018) baseline (24.04 kg N ha yr) and is only slightly higher than the DM 2044 scenario (21.06 kg N ha yr). The assessment assumed there was no change in background nitrogen deposition rates between 2018 and 2044 (which is a precautionary approach considering the findings of recent research in nitrogen projections undertaken by the Joint Nature

Conservation Committee[7] (JNCC) (see Appendix Q) and that the reductions in between the existing and future baseline are driven by reductions in NOx from local road traffic. Considering that the deposition rate in the 2044 DS scenario is lower than the current baseline (base 2018), and that is site is currently in a 'maintain' condition according to the site conservation objectives (see below), there is negligible potential that the change in deposition from the DM scenario to the DS 2044 scenario will adversely impact upon the site integrity. In addition, the habitats in the locations where exceedances of the 1% criterion are roadside screening planting within the highway verge, or overgrown bush, not the calcareous grassland habitats for which the SAC is designated.

8.2.9 As such it is considered that there will be no adverse effects upon integrity of the SAC.

8.2.10 Whilst it is recognised that these impacts do not consider the additional nitrogen deposition from the modelling of road traffic NH_3, the evidence on projections in nitrogen deposition presented in Appendix Q demonstrates that nitrogen deposition (inclusive of road traffic NH_3) would reduce between the existing and future baseline, due to improvement in emissions as a result of existing government commitments towards the reduction of NOx emissions (which serve to therefore reduce nitrogen deposition). This conclusion is informed by consideration of the evidence from the JNCC Nitrogen Futures project which indicates that even with a national 'business as usual' approach (i.e. without any additional interventions to reduce NOx, NH3 and nitrogen deposition than those currently adopted or committed to), that N deposition (inclusive of NH_3 from road traffic emissions) is expected to decrease in the future relative to the current situation.

8.2.11 Therefore it is not unreasonable to assume that if the SAC site is currently in a 'maintain' condition with existing nitrogen deposition rates, that it will still be in a 'maintain' condition in the future when nitrogen deposition rates are lower, even with the proposed Development.

8.2.12 Whilst this shows that the current level of nitrogen deposition affecting the site is likely to reduce in the future, the applicant is committed to monitoring the air quality position at future delivery milestones through the submission of HRA updates at each phase of the development (note: NE will be consulted on these submissions as a matter of course, enabling further evidence to be presented at future relevant stages). For each submission, we will be able to take into account that phase in isolation plus in-combination effects with previous phases, using the most up to date emission factors which should be reflective of any future transport projections including decarbonisation policies.

8.2.13 Following outline application stage there are a further series of planning approval stages before any development can be fully consented and delivered, and further considerations of the Habitats Regulations to ensure no impact on site integrity. This provides additional safeguards against adverse effects upon the integrity of the SAC.

8.2.14 There are phase-wide obligations that will likely include review of the environmental effects identified at outline stage and any relevant revised mitigation measures that would be relevant at that stage. It is at this stage where the effects of the change in nitrogen deposition (including NH_3) could be considered within an updated air quality assessment for agreement with relevant stakeholders, including Natural England. This approach is summarised in Image 5.

8.2.15 Alternatively, the reserved matters stage offers an additional opportunity to address updates required to the ES material to reflect the environmental effects anticipated at that time.

8.2.16 This is approach is considered robust due to the following;

- The SAC is currently in 'Maintain' condition (rather than 'restore') the designated features, there is no Site Nitrogen Action Plan requiring NE to reduce nitrogen at its current levels;

[7] JNCC Report No. 665: Nitrogen Futures – September 2020

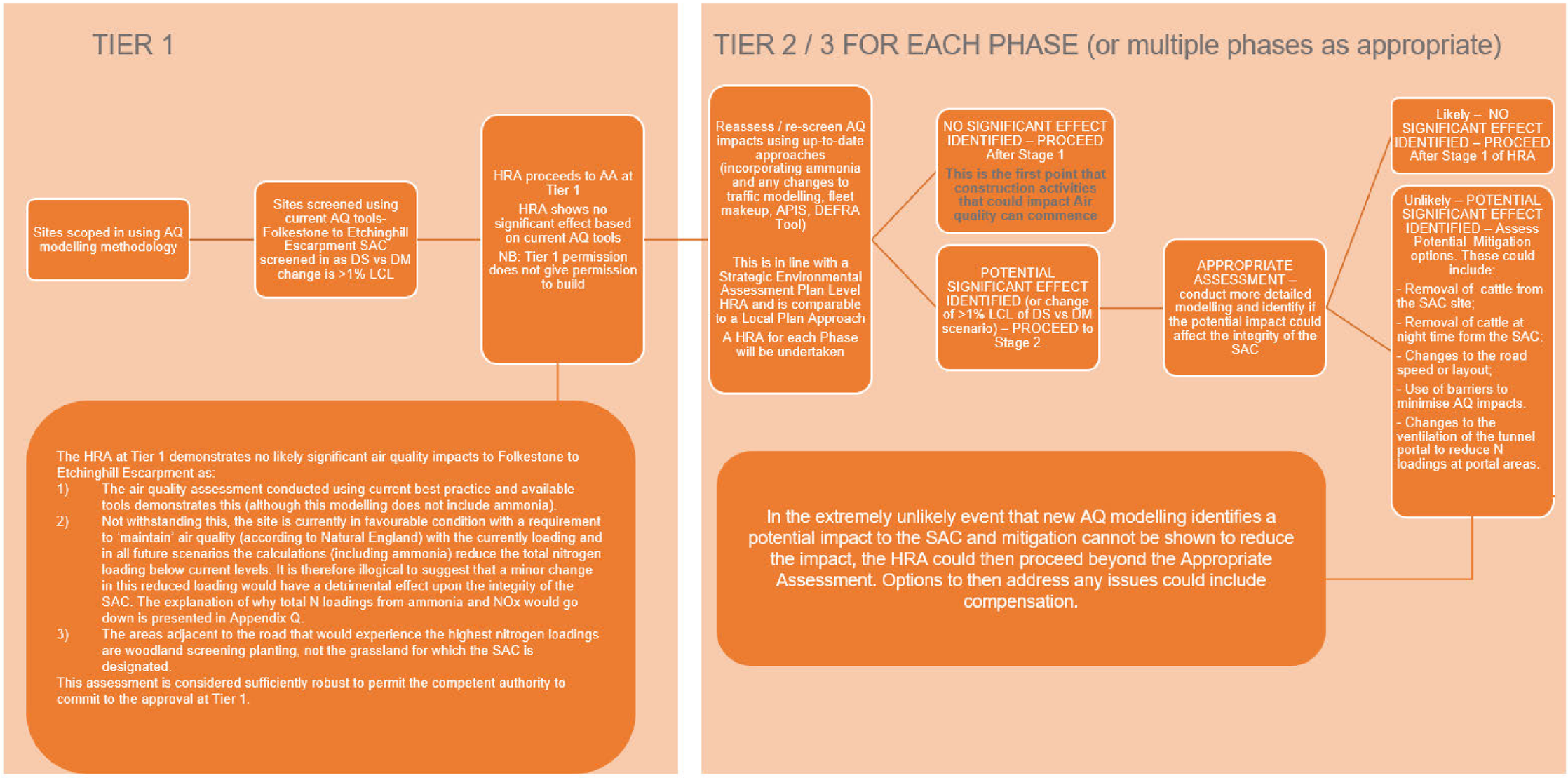
- There is sufficient evidence in this document that shows that Nitrogen deposition will be lower in the future than the site is currently experiencing.
- There are sufficient safeguards that in the planning process to ensure that the assessment at later tiers confirms the conclusions of this HRA and that the change in N deposition will not affect site integrity on the SAC.

8.2.17 This approach has been supported by Natural England. In an email dated 09/09/2022 (Appendix N), Natural England stated:

"Given the evolving approach to the inclusion of ammonia in road traffic assessments, we accept that further time may be needed to include ammonia as part of the air quality assessment. Whilst an air quality assessment will need to be included as part of the ES and HRA for the outline application, we would accept that an assessment which includes ammonia could follow at a later stage. As we discussed, the tiered approach to the consideration of this development provides the opportunity for Natural England to comment on this detailed aspect of the ES and HRA when this further assessment is produced."

As a result of the modelling done to date, the rationale outlined in Appendix Q and the safeguards at subsequent planning approvals, it is concluded within this Appropriate Assessment that there is no reasonable scientific doubt that approval at this stage would result in adverse effects upon the integrity of the SAC.

Image 5: Rationale for the proposed approach to ammonia modelling within HRA at the three Tiers of the Application process



8.3 Recreational Pressure

8.3.1 Two sites have been taken forward for Appropriate Assessment, namely:

- Folkestone to Etchinghill Escarpment SAC, which is approximately 4.2km north-east of the proposed Development;
- Wye and Crundale Downs SAC, which is approximately 5.8km north of the proposed Development;

Assessment

8.3.2 Further assessment work has taken account of the following:

- Collation of baseline data, including existing information (where known) about visitor numbers and travel patterns. Visitor surveys were undertaken at locations within carparks adjacent to the Folkestone to Etchinghill Escarpment SAC and the Wye and Crundale Downs SAC over the course of four days in 2017[8] – two consecutive weekdays (30th/31st August) and a weekend (23rd/24th September). Each survey day included early morning (7am – 9am) and early evening (5pm – 7pm) visitor counts, and interviews (where visitors may be more likely to be local residents) in addition to periods during the day. Surveyors undertook both counts of visitor numbers within specific time periods as well as interviews with visitors. This methodology was agreed with Natural England and F&HDC as confirmed in email correspondence provided at Appendix D and in the survey methodology note provided at Appendix T to this report.
- Consideration of the potential effects of the proposed Development on recreational pressure, taking into account the likely population generated, the proposed Development design which includes accessible recreational greenspace, and travel characteristics / visitor patterns identified from visitor surveys.

8.3.3 The visitor surveys undertaken by Arcadis in 2017 were used to determine level of use, principal recreational uses (e.g. walking, fitness, dog walking), likely catchment areas for visitors and principal mode of travel used to reach each destination. Over four days, a total of 164 visits were recorded. A full record of survey methodology and survey data is provided at Appendix T. Key findings from the surveys included that:

- Visitor numbers were understandably higher at the weekend than on a weekday;
- The majority of people interviewed were day visitors rather than people visiting as part of a wider holiday;
- The majority of visitors on both weekdays and weekends were from within a twenty-minute drive time (the majority of visitors to the Folkestone to Etchinghill Escarpment SAC were primarily from Folkestone and surrounding settlements, whilst the majority of visitors to the Wye and Crundale Downs SAC were from the towns of Ashford and Wye);
- Reasons for people choosing these locations to visit included proximity to home, the variety of footpaths and tracks available, and the quality of the scenery; and
- Walking and dog walking formed the principal activities undertaken at both locations.

[8] Surveys in 2017 have not been practicable to update due to the ongoing effect of COVID 19 on recreational use of open spaces. The 2017 surveys are considered to best represent recreational usage in a year not impacted by COVID 19 restrictions. It was not possible to conduct 2022 surveys due to the date of submission.

8.3.4 A visitor survey undertaken by the AONB Unit identified that the main motivations for visiting the Kent Downs are for its beauty and tranquillity, with walking being the main activity (Kent Downs AONB unit, 2013).

Impacts of Covid-19 on Recreation

8.3.5 Other issues of relevance here relate to research undertaken into the impacts of Covid-19 on levels of recreation and usage of green space, which has shown changes in the way people interact with the outdoors as well as changes in people's perceptions of nature (ONS 2021). Survey data drawn from the People and Nature Survey for England gathers information on people's experiences and views about the natural environment. During April to June 2020, people were getting outside more often than usual with 40% of adults reporting that they had spent more time outside since the coronavirus restrictions began and 31% were exercising more in outdoor spaces. Over these three months, 58% of the adult population had visited a natural space in the last 14 days. The main reasons people gave for visiting natural spaces were for fresh air, physical and mental health, and to connect with wildlife/nature. It is yet to be seen whether these initial changes in people's behaviours in terms of accessing outdoor space continues or reverts to a pre-pandemic level.

Potential areas of impact

8.3.6 This section considers the particular vulnerabilities of the two sites, the likely areas of impact associated with the proposed Development and conclusions with regard to likely significant effects. Vulnerabilities of the two sites are as follows:

- Folkestone to Etchinghill Escarpment SAC – the chalk grasslands and orchids, for which the SAC is designated, are susceptible to recreational activities including dog walking and associated nutrient enrichment which may alter the soil chemistry and increase the prevalence of competitive species, or by physical disturbances such as through trampling, vandalism, or fire. Due to the proximity of the site to Folkestone and other towns and villages in north east Shepway, parts of the SAC already receive relatively high levels of recreational access and discussions with the White Cliffs Countryside Partnership (WCCP) Project Manager, Kirk Alexander, revealed recent damage by trampling and theft of the rare orchid species, which has resulted in the management team to consider the potential for additional protective measures to conserve the orchid populations. (LUC 2018). As noted earlier, the site is actively managed, including provision of gates and fencing, and the presence of an on-site warden; other factors of relevance to this site (highlighted in the Draft Dover District Local Plan (Reg 18) HRA (January 2021) include that people tend to follow desire lines and utilise regular routes, implying that direct pressures to the wider site can be restricted and managed; in addition to the fact that much of the SAC is located on steep escarpments which are not conducive to recreational activities and therefore likely to be resilient to associated adverse effects. Recreation is not identified as a current pressure or threat in Natural England's Site Improvement Plan.
- Wye and Crundale Downs SAC – located approximately 6km to the north of the proposed Development. This is an extensive area of approximately 110 hectares of chalk grassland located between the settlements of Wye and Hastingleigh. The site is designated as a SAC for its semi-natural dry grasslands and scrubland, including important orchid sites. The Downs sit between the M20 and A28 to the north of Ashford (on the southern edge of the North Downs). The Site Improvement Plan does not currently list recreational pressure as a threat although NE has identified this site as once of interest in relation to increases in recreational pressure.

8.3.7 The estimated new population of Otterpool Park, once fully built-out, is in the region of 20,400 people (based on 8,500 households and a household density of 2.4 people per dwelling) with the potential to increase to 10,000 homes post Development build out. The actual population increase to the area is likely to be lower (for example a proportion of the new population are likely to already live in the district, coupled with the fact that household sizes may be lower than has been the case

historically). The total population also includes young children / older people / people who may not be sufficiently mobile to access the wider countryside.

8.3.8 As well as additional recreational pressure from populations once the proposed Development is fully built out, there is the potential for short-term additional pressure on designated sites during the construction and early occupation phases of the proposed Development.

8.3.9 Potential impacts also arise from the types of recreation being undertaken, with activities such as dog walking potentially causing disturbance to wildlife. Nationally, approximately 34% of households currently own a dog (this figure is known to have increased during the recent Covid-19 pandemic). For the proposed Development a 34% dog ownership rate would translate into approximately 2,900 dog-owning households (although in reality this figure may be lower as dog-ownership will also depend on accommodation type (houses / flats). Other potential impacts of relevance to designated sites include trampling and general disturbance as referenced in previous sections of this HRA.

8.3.10 The visitor surveys undertaken by Arcadis identified that a significant proportion of people use particular walking routes because of the proximity to their home and/or within 20 minutes maximum drive time. The areas most likely to be affected by the new population living at Otterpool Park are therefore likely to be those nearest to the proposed Development, for example the Lympne Escarpment SSSI which is 300m south of the proposed Development, rather than the environmentally sensitive areas identified in this HRA. Dog walking was the principal activity undertaken at both Sites in the National Sites Network.

8.3.11 The proposed Development includes a large proportion of publicly accessible open space and high-quality green infrastructure (over 50%), including parks, landscape areas and habitats. The incorporation of green infrastructure, open space and a variety of habitats and landscapes forms an intrinsic part of the design of Otterpool Park, as set out in the Green Infrastructure Strategy (ES Appendix 4.11). Planned green infrastructure includes:

- a variety of woodlands, wetlands, meadows, allotments, recreation areas all connected by green corridors with retained trees, hedgerows and water courses;
- a landscaped green open space to create a setting for Westenhanger Castle;
- creation of a Woodland Country Park on the upper slopes of the site between Harringe Brook Woods, Otterpool Manor and Upper Otterpool Farm;
- use of the East Stour River corridor to incorporate both formal and informal walking and cycling routes connecting areas of open space and leisure / sports provision; and
- creation of a landscape buffer between the proposed Development and the village of Lympne, with opportunities here for informal recreation, walking and horse-riding.

8.3.12 Green movement corridors have been designed to enable people to access open spaces in the wider landscape in the vicinity of Otterpool Park. Corridors provide access to off-site footpaths and spaces in the surrounding areas, including north towards Sellindge, west along the East Stour River, south towards Lympne and to footpaths that lead to the woodlands and parkland to the east of the site. The design takes into account the sensitivity of these areas and places and discourages high levels of access where recreational pressure may have an adverse impact.

8.3.13 It is therefore likely that a significant proportion of those seeking recreational activity including dogwalkers in particular, will utilise the spaces and routes within the proposed Development for regular activities.

8.3.14 The Green Infrastructure Strategy (ES Appendix 4.11) prepared for the proposed Development identifies a phased approach for green infrastructure as part of development proposals. National green infrastructure guidance (including Natural England's publication NE176) recommends where possible that structural planting proposals are implemented in advance of the construction of built development. In addition to other benefits, this approach can help mitigate

construction-related effects, allow distinct character areas within the proposed Development to evolve more quickly and deliver health, wellbeing and recreational resources for the emerging community. There is also an opportunity for the use of 'meanwhile spaces' to provide additional green infrastructure areas during the construction phase. Further proposals are for the town park to the south of Westenhanger Castle to be developed in the first five years of the proposed Development, thus benefitting 'early occupiers'. As such it is not considered that there is potential for a significant effect on the Folkestone to Etchinghill Escarpment SAC or Wye and Crundale Downs SAC during the early stages of the development.

8.3.15 In summary, proposals are not likely to have an adverse effect upon the integrity of Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC through recreational pressure. The conclusions have been informed both by baseline evidence, notably visitor surveys undertaken at these sites, together with changing behaviours in relation to open space and the needs of the population generated by the proposed Development. The ways in which people interact with the outdoors changed during the Covid-19 pandemic (although it is not yet known whether this trend will continue to the same extent), plus people have a range of recreational needs – whether this be for dog walking, exercising, or being 'in nature'.

8.3.16 Future residents of the proposed Development are likely to visit different types of spaces to fulfil different needs, particularly those in proximity to their home. Areas such as the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC form one type of space amongst many. Other factors that have informed the conclusions include the distance of the sites from the proposed Development. The conclusions that no likely significant effects are anticipated is founded on these factors, together with the multiplicity of alternative outdoor spaces that are provided either as part of the proposed Development or in its vicinity.

8.3.17 Good practice measures to monitor and thereby help manage the Folkestone to Etchinghill Escarpment SAC and Wye and Crundale Downs SAC include the preparation of an Access Strategy for the proposed Development. Further engagement with Natural England about the content of the Access Strategy would be welcomed at a later stage in the design, for example when further detail is available at Tier 2; i.e. in line with NE's recommendation "that the Otterpool Park application revisits the potential for recreational impacts at the detailed design stage".

~~9~~ Conclusions

9.1.1 Eighteen Sites in the National Sites Network were assessed for the potential effects from the proposed Development due to functionally linked land, reduction in air quality, water pollution (from nutrients) and recreational pressure.

9.1.2 Birds were the only sufficiently mobile receptor to have the potential to use habitat functionally linked to the proposed Development site. These were screened out as no qualifying bird features were being supported or maintained by the site from the bird survey results, nor does the proposed Development support habitat that would be likely to support the qualifying features in any significant numbers.

9.1.3 Only one site ~~was within~~ required assessment in the ~~threshold~~HRA for impacts from air quality ~~assessment~~, the Folkestone to Etchinghill Escarpment SAC (Figure 3). ~~In line with~~ Natural England subsequently raised NH_3 from road traffic as consideration that the ~~IAQM's designated sites guidance (2020),~~Environmental Statement had not made. It was agreed that NH_3 could be assessed at subsequent tiers.

9.1.4 To provide surety, the potential impact from air quality changes upon Folkestone to Etchinghill Escarpment (without consideration of NH_3) was progressed to Appropriate Assessment at this ~~HRA defers to the Local Plan HRA. No significant~~tier (using the Air Quality data available). The air quality modelling results when assessed at Appropriate Assessment shows that there is no reasonable scientific doubt that approval at this stage would result in adverse effects ~~are predicted for the proposed Development in terms of air quality impacts. Comments received from Natural England on~~upon the ~~March 2022 HRA submission in relation to air quality, specifically ammonia are addressed and a high-level~~integrity of the SAC.

~~9.1.3~~9.1.5 Measures are outlined in the Appropriate Assessment to ensure that this position is reassessed / screened as necessary at subsequent tiers of planning approval (i.e through including NH_3 in the assessment ~~and rationale for~~). Rationale is also provided to demonstrate that there is no reasonable scientific doubt that approval at this stage would result in adverse effects upon the integrity of the SAC, and that national future projections of nitrogen deposition (inclusive of road traffic ammonia) show that loading rates will be lower in the future baseline than in the existing baseline. The proposed framework to future assessment ~~is outlined which permits screening at subsequent Tiers of the planning process.~~shows there is no way that the development would be allowed to proceed whilst causing unmitigated adverse impacts to the integrity of the SAC. Mitigation is outlined in Image 5 that could be applied at subsequent tiers in the unlikely event that it is required. It is recommended that the project can be approved at Tier 1 following the Appropriate Assessment, with subsequent supplementary assessment at subsequent tiers (secured through planning condition).

~~9.1.4~~9.1.6 A number of sites were of particular stakeholder concern due to a potential increase in recreational pressure, primary and secondary data were analysed for these sites: the Folkestone to Etchinghill Escarpment SAC, the Wye and Crundale Downs SAC, the Dover to Kingsdown Cliffs SAC and the Dungeness complex (SPA, SAC and Ramsar). While small numbers of additional visitors may be expected, visitor behaviour predicted that the proposed Development's residents were unlikely to travel to these sites in any significant numbers and the primary recreational use was dog walking. Given the large amount of accessible greenspace integral to the design (Figure 1) it is anticipated that a significant proportion of residents would utilise this space for dog walking and visits to the designated sites would be in small numbers for recreational purposes associated with the appreciation of the designated features.

~~9.1.5~~9.1.7 Of the nine remaining sites one is not publicly accessible, Parkgate Down SAC. The remaining eight sites are over 15km away and seven of these are over 20km away. Residents of the proposed Development are unlikely to use these sites in any significant numbers. This assessment was supported by Natural England in the response to the 2019 submission. Comments received

from Natural England on the March 2022 HRA submission in relation to Recreational Pressure are addressed separately and no further assessment was needed.

~~9.1.6~~9.1.8 With regards to impacts resulting from water pollution, Natural England's current advice with regard to any proposed Development project of this nature within the Stour catchment is that mitigation needs to be implemented in order to achieve nutrient neutrality; this has further been confirmed through undertaking precautionary project nutrient budget calculations and providing suitable mitigation proposals. The potential impact of the ~~site~~proposed development with designed mitigation applied is assessed through an Appropriate Assessment.

~~9.1.7~~9.1.9 Proposals are outlined as a component of the development that have been agreed in principle with NE and the EA, which would ensure that the site can achieve nutrient neutrality. Detailed designs and maintenance plans of the mitigation proposals will be produced during Tier 2 and Tier 3 Stages through the implementation of Tier 1 outline planning conditions. As it can it be demonstrated at the Appropriate Assessment stage that the proposal will not adversely affect the integrity of the Stodmarsh SAC, SPA and Ramsar site, no further stages of HRA are required.

~~9.1.8~~9.1.10 A review of the Local Plan HRAs, namely the F&HDC Core Strategy Review (LUC, 2018) and the F&HDC PPLP (LUC, 2018), was carried out to assess other plans and projects which could lead to likely significant effects on Sites in the National Sites Network when considered in combination with the proposed Development. It concluded that there were no likely significant effects, there are no additional developments of note since this assessment that in combination with the proposed Development would change this assessment.

~~10~~ References

Reference Description
Arcadis Environmental Statement Volume 2, Chapter 15 - Surface Water Resources and Flood Risk
Arcadis Environmental Statement Volume 2, Chapter 15 Appendix 2 Water Cycle Study
Arcadis Environmental Statement Volume 2, Chapter 2: Socio-economics and Community
Arcadis Environmental Statement Volume 2, Chapter 7 - Biodiversity of the ES
Canterbury City Council (2014) Canterbury District Local Plan review Public Examination 2014 Topic Paper no 3 Habitat Regulations Issues
Dungeness Complex - Sustainable Access and Recreation Management Strategy – Draft (Prepared for Shepway and Rother District Council, 2017)
ECLI:EU:C:2018:244, Judgment of the Court (Seventh Chamber), 12 April 2018, Reference for a preliminary ruling — Environment — Directive 92/43/EEC — Conservation of natural habitats — Special areas of conservation — Article 6(3), available online at: http://curia.europa.eu/juris/document/document.jsf?docid=200970&doclang=EN [accessed 17/01/2019]
European Commission (2000), Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC;
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Folkestone to Etchinghill Escarpment SSSI – S15 Arpinge Range (003)
Gilbert, G., Gibbons, D., Evans, J. (1998) Bird Monitoring Methods: A Manual of Techniques for Key UK Species. Pelagic Publishing, Exeter.
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Lunt, J., and Lischak, K. (2008) Natural England – a new dawn? Rights and responsibilities towards the natural environment and how these may change – the 'Dilly Lane' case. Environmental Law & Management 246 (2008) 20. Lawtext Publishing Limited www.lawtext.com: Case reference [2008] EWHC 1204 (Admin)
Natural England (2022) Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impacts on habitats sites.
LUC (2018) F&HDC Core Strategy Review
LUC (2018) F&HDC Places and Policies Local Plan 2017
LUC (2018) Folkestone & Hythe Proposed Submission Core Strategy Review – Habitats Regulations Assessment
LUC (2019) Folkestone & Hythe Core Strategy Review – HRA addendum
RSPB (2013) Residential volunteering on RSPB nature reserves 2013
CJEU C-323/17 People Over Wind and Peter Sweetman vs Coillte Teoranta CURIA - List of results (europa.eu)
The Conservation of Habitats and Species Regulations 2017 (as amended);
The Design Manual for Roads and Bridges (DMRB) Volume 11 Environmental Assessment (2007)
The Design Manual for Roads and Bridges (DMRB) LA 105 Air Quality guidance

Reference Description
The Highway Agency (HA) Interim Advice Note 141/11: Assessment of Implications (of Highways and/or Roads Projects) on Sites in the National Sites Network (Including Appropriate Assessment) (2011)
The Places Team (2017) Dungeness Complex Sustainable Access and Recreation Management Strategy (SARMS) prepared for Shepway District Council and Rother District Council
The Planning Inspectorate Habitat Regulations Assessment Advice Note Ten: Habitat Regulations Assessment relevant to nationally significant infrastructure projects, Version 5, August 2013
UK Department for Transport's (DfT's) Transport Analysis Guidance (TAG) Unit A3: Environmental Impact Appraisal (2015)
URS (2011) Rother and Shepway Core Strategies Habitat Regulations Assessment (Dungeness SAC, Dungeness to Pett Level SPA and future SPA extension and Ramsar site)
URS (2012) Shepway Core Strategy Habitat Regulations Assessment (Sites other than the Dungeness complex)
Dover District Council (2010) Whitfield Urban Expansion Supplementary Planning Document HRA Consultation Draft
WHO (2000), Effects of nitrogen containing air pollutants: critical levels Air Quality Guidelines – Second Edition, Chapter 11. WHO Regional Office for Europe, Copenhagen, Denmark, 2000
Holman et al (2020). A guide to the assessment of air quality impacts on designated nature conservation sites. v1.1. Institute of Air Quality Management, London.
CIEEM (2021) Advice on Ecological Assessment of Air Quality Impacts. Chartered Institute of Ecology and Environmental Management. Winchester, UK.

Figure 1: Proposed Development Design Showing Accessible Green Infrastructure Provision

Figure 2: Sites in the National Sites Network within 30km

Appendix A: Screening Matrices

Potential Impacts to Designated Sites

Potential impacts upon the European site(s)*** which are considered within the Stage 1 Habitats Regulations Assessment (HRA) Report are provided in the table below (~~Table 8: HRA screening matrix).~~Table 10). Impacts have been grouped where appropriate for ease of presentation.

Table 10: HRA screening matrix

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
Blean Complex SAC	21.6km N	Annex I habitats that are a primary reason for selection of this site: • 9160. Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*; Oak-hornbeam forests	Threats identified in Site Improvement Plan include: • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment Does not list recreational pressure as a current sensitivity. This site is located approximately 21.6km north of the proposed Development t. In line with the assessment provided for the Dover to Kingsdown Cliffs SAC, the low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development, make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No mobile qualifying features nor any connecting habitat to the proposed Development. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	N/A
Dover to Kingsdown Cliffs SAC	20.1km NE	Annex I habitats that are a primary reason for selection of this site: • 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts • 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Threats identified in Site Improvement Plan include: • Inappropriate scrub control • Undergrazing • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment Does not list recreational pressure as a current sensitivity. Was identified by stakeholders as a site of particular concern. Studies identified a likely increase in pressure of 0.7% due to Shepway, i.e. extremely small. This confirms (based on actual visitor survey data) that while an increased population in Shepway probably will result in more visits to the SAC, the core catchment of the SAC with regard to local residents is essentially the Dover town area. The low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No mobile qualifying features nor any connecting habitat to the proposed Development. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	N/A

*** As defined in Advice Note 10.

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
				proposed Development and the proximity of over 50% accessible greenspace within the proposed Development, make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1				
Dungeness SAC	9.9km S	Annex I habitats that are a primary reason for selection of this site: • 1210 Annual vegetation of drift lines • 1220 Perennial vegetation of stony banks Annex II species that are a primary reason for selection of this site: • 1166 *Triturus cristatus*: Great crested newt	Threats identified in Site Improvement Plan include: • Military pressure • Illicit vehicle use • Invasive species • Inappropriate scrub control • Overgrazing • Public access/disturbance • Direct impact from 3rd parties • Air pollution: impact of atmospheric nitrogen deposition • Inappropriate water levels • Water pollution	Scoped in for assessment Was identified by stakeholders as a site of particular concern. Surveys suggested that the probable increase in visitors as a result of the potential population increase in Shepway could be expected to be approximately 5% Additionally, given the existing survey data, it is not likely that those new visitors would be frequent visitors and the Arcadis survey data highlighted that proximity to the site for recreational users is a key factor. The low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development, make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No sufficiently mobile qualifying features nor any connecting habitat to the proposed Development. Screened out at stage 1Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	N/A
Dungeness, Romney Marsh and Rye Bay SPA (with Marine extension)	8.7km S (with Marine extension 2.9km S)	Qualifies under article 4.1 of the Directive (2009/147/EC), as it is regularly used by >1% of the UK population of the following Annex I species: • Bewick's swan *Cygnus columbianus bewickii* • Bittern *Botaurus stellaris* • Hen harrier *Circus cyaneus* • Golden plover *Pluvialis apricaria* • Ruff *Philomachus pugnax* • Aquatic warbler *Acrocephalus paludicola*	Threats identified in Site Improvement Plan include: • Military pressure • Illicit vehicle use • Predation • Changes in species distribution • Invasive species • Public access/disturbance • Direct impact from 3rd parties • Inappropriate water levels • Inappropriate ditch management	Scoped in for assessment Was identified by stakeholders as a site of particular concern. Surveys suggested that the probable increase in visitors as a result of the potential population increase in Shepway could be expected to be approximately 5% Additionally, given the existing survey data, it is not likely that those new visitors would be frequent visitors and the Arcadis survey data highlighted that proximity to the site for recreational users is a key factor.	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV),	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present with surveys	Scoped out for assessment. Site is not hydrologically connected to the proposed development site.	N/A

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
		• Marsh harrier *Circus aeruginosus* • Avocet *Recurvirostra avosetta* • Mediterranean gull *Larus melanocephalus* • Sandwich tern *Sterna sandvicensis* • Common tern *Sterna hirundo* • Little tern *Sterna albifrons* Qualifies under article 4.2 of the Directive (2009/147/EC), as it is regularly used by >1% of the biogeographical populations of the following migratory species: • Shoveler *Anas clypeata*: 485 wintering individuals (1.2% NW & C Europe non-breeding population)	• Coastal squeeze • Water pollution • Fisheries: commercial marine and estuarine	The low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development, make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	• 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	undertaken for the proposed Development area nor was habitat within the proposed Development area suitable for supporting or maintaining significant numbers of qualifying features. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1		
Dungeness, Romney Marsh and Rye Bay Ramsar	9.9km S	Criterion 1 (contains rare, unique examples of natural wetland types), including: • Annual vegetation of drift lines and the coastal fringes of perennial vegetation of stony banks (Ramsar wetland type E – sand, shingle or pebble shores). • Natural shingle wetlands: saline lagoons (Ramsar wetland type J – coastal brackish/saline lagoons), freshwater pits (Ramsar wetland type K – coastal freshwater lagoons) and basin fens (Ramsar wetland type U – non-forested peatlands). Criterion 2 (supports threatened ecological communities), including: • Bryophytes e.g. wetland thread-mosses *Bryum* species • Vascular plants e.g. sea barley *Hordeum marinum*, Borrer's saltmarsh-grass *Puccinellia fasciculata* and slender hare's-ear *Bupleurum tenuissimum*, sea-heath *Frankenia laevis*, sharp-leaved pondweed *Potamogeton acutifolius*, divided sedge *Carex divisa* and rootless duckweed *Wolffia arrhiza*. • Invertebrates e.g. reed beetles *Donacia*, snail-killing flies (*Sciomyzidae*) and soldierflies (*Stratiomyidae*)	• As above.	Scoped in for assessment Was identified by stakeholders as a site of particular concern. Surveys suggested that the probable increase in visitors as a result of the potential population increase in Shepway could be expected to be approximately 5% Additionally, given the existing survey data, it is not likely that those new visitors would be frequent visitors and the Arcadis survey data highlighted that proximity to the site for recreational users is a key factor. The low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development , make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present with surveys undertaken for the proposed Development area nor was habitat within the proposed Development area suitable for supporting or maintaining significant numbers of qualifying features. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	N/A

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
		It also supports vulnerable, endangered or critically endangered wetland species, including: • greater water-parsnip *Sium latifolium* • Warne's thread-moss *Bryum warneum* • water vole *Arvicola amphibius* • aquatic warbler *Acrocephalus paludicola* • great crested newt • medicinal leech *Hirudo medicinalis* • a ground beetle *Omophron limbatum* • marsh mallow moth *Hydraecia osseola hucherardi* • De Folin's lagoon snail *Caecum amoricum* Criterion 5 (regularly supports >20,000 waterbirds); in the non-breeding season the site supports 34,957 waterbirds (5-year peak mean 2002/3 – 2006/7). Criterion 6 (regularly supports 1% individuals in the population of the following species): • Mute swan *Cygnus olo*r; 348 wintering individuals (1.1% British population) • Shoveler: 485 wintering individuals (1.2% NW & C Europe non-breeding population)						
Folkestone to Etchinghill Escarpment SAC	4.2km NE	Annex I habitats that are a primary reason for selection of this site: • 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Threats identified in the Site Improvement Plan include: • Undergrazing • Inappropriate scrub control • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment Does not list recreational pressure as a current sensitivity. Was identified by stakeholders as a site of particular concern. Visitor surveys undertaken by Arcadis identified that a significant proportion of people use particular walking routes because of the proximity to their home and/or within 20 minutes maximum drive time. The low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the	Scoped in for assessment The worst-case increase in Nitrogen was ~~c.2~~1.4% of the lower critical load above the predicted Do Minimum scenario in ~~2046, however this was still below the critical loads for the habitats present, and below the current levels of N for the site and therefore no significant effect on the site is predicted~~2044. ~~Screened out at stage 1~~Assessed at Appropriate Assessment.	Scoped in for assessment No mobile qualifying features nor any connecting habitat to the proposed Development. Screened out at stage 1	~~Scoped out for assessment~~. Air quality assessed at Appropriate Assessment. Recreational impacts scoped in for Appropriate Assessment. Site is not hydrologically connected to the proposed Development site.	~~N/A~~Once the variety of recreational opportunities that are provided on site at Otterpool Park together with existing management practices at the SAC and the results of the recreational surveys relating to visitor behaviour are considered it is concluded that there are no adverse effects on site integrity. No adverse effect relating to air quality

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
				proposed Development and the proximity of over 50% accessible greenspace within the proposed Development , make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1				on SAC integrity resulting from permission at this Tier identified.
Lydden and Temple Ewell Downs SAC	15.1km NE	Annex I habitats that are a primary reason for selection of this site: • 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Threats identified in the Site Improvement Plan include: • Overgrazing • Public access/disturbance • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment This site is located approximately 15km to the northeast of the proposed Development. In line with the assessment provided for the Dover to Kingsdown Cliffs SAC, the low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development, make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds Screened out at stage 1	Scoped in for assessment No mobile qualifying features nor any connecting habitat to the proposed Development. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	N/A
Parkgate Down SAC	9.1km NE	Annex I habitats that are a primary reason for selection of this site: • 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Threats identified in the Site Improvement Plan include: • Habitat fragmentation • Air pollution: impact atmospheric nitrogen deposition	Scoped in for assessment Recreational pressure is not considered an existing vulnerability. No public rights of way enter the site and a warden is employed by KWT to manage and monitor the site and oversee implementation of access restrictions to protect sensitive ecological features including the orchid assemblage for which the site is designated. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Habitats that form qualifying features of the site were not present on the development in significant quantities. Qualifying features are not mobile and as such there is no functionally linked land on the development.	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	N/A

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
						Screened out at stage 1		
Sandwich Bay SAC	28.9km NE	Annex I habitats that are a primary reason for selection of this site: • 2110 Embryonic shifting dunes • 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") • 2130 Fixed coastal dunes with herbaceous vegetation ("grey dunes") • 2170 Dunes with *Salix repens ssp. argentea* (*Salicion arenariae*) Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: • 2190 Humid dune slacks	Threats identified in the Site Improvement Plan include: • Invasive species • Public access/disturbance • Hydrological changes • Air pollution: impact atmospheric nitrogen deposition • Fisheries: commercial marine and estuarine	Scoped in for assessment This site is located approximately 28.9km north of the proposed Development. In line with the assessment provided for the Dover to Kingsdown Cliffs SAC, the low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development , make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present on the development. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	N/A
Stodmarsh SAC	23.2km N	Annex II species that are a primary reason for selection of this site: • 1016 Desmoulin's whorl snail *Vertigo moulinsiana*	Threats identified on the Site Improvement Plan include: • Water pollution • Invasive species • Inappropriate scrub control • Air pollution: impact of atmospheric nitrogen deposition	Scoped out of assessment Too distant from the proposed Development for any significant effect direct effect on features (over 23.2km away)	Scoped out of assessment Too distant from the proposed Development for any significant effect direct effect on features (over 23.2km away)	Scoped out of assessment Too distant from the proposed Development for any significant effect direct effect on features (over 23.2km away)	Scoped in for assessment. The proposed Development has potential to lead to significant effects associated with changes to water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater via water treatment works, and drainage to watercourses or ditches within the Stour catchment. Stage 2 Appropriate Assessment required. On site works will achieve nutrient neutrality therefore no ~~residual~~adverse effects ~~will remain~~. The HRA is completed at Stage 2.	On-site mitigation is outlined which ensures nutrient neutrality. No assessment beyond Stage 2 required.

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
Stodmarsh SPA	23.2km N	Qualifies under article 4.1 of the Directive (2009/147/EC), as it is regularly used by >1% of the UK population of the following Annex I species: • Great bittern *Botaurus stellaris* (Non-breeding) • Hen harrier *Circus cyaneus* (Non-breeding) Qualifies under article 4.2 of the Directive (2009/147/EC), as it is regularly used by >1% of the biogeographical populations of the following migratory species: • Gadwall *Anas strepera* (Breeding) • Northern shoveler *Anas clypeata* (Non-breeding) It further qualifies under Article 4.2 by virtue of regularly supporting a diverse waterbird and breeding bird assemblage.	Threats identified on the Site Improvement Plan include: • Water pollution • Invasive species • Inappropriate scrub control • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment This site is located approximately 23.2km north of the proposed Development. In line with the assessment provided for the Dover to Kingsdown Cliffs SAC, the low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development, make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present with surveys undertaken for the proposed Development area nor was habitat within the proposed Development area suitable for supporting or maintaining significant numbers of qualifying features. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1	Scoped in for assessment The proposed Development has potential to lead to significant effects associated with changes to water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater via water treatment works, and drainage to watercourses or ditches within the Stour catchment. Stage 2 Appropriate Assessment required. On site works will achieve nutrient neutrality therefore no residual effects will remain. The HRA is completed at Stage 2.	On-site mitigation is outlined which ensures nutrient neutrality. No assessment beyond Stage 2 required.
Stodmarsh Ramsar	23.2km N	Criterion 2 (supports threatened ecological communities), including: • Invertebrates (six British Red Data Book wetland species) • Vascular plants (two nationally rare plants, and five nationally scarce species) • Rare wetland birds	As above.	Scoped in for assessment This site is located approximately 23.2km north of the proposed Development. In line with the assessment provided for the Dover to Kingsdown Cliffs SAC, the low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development , make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds • Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present on the development. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1	Scoped in for assessment The proposed Development has potential to lead to significant effects associated with changes to water quality, specifically increased nutrient inputs (nitrogen and phosphorous) through wastewater via water treatment works, and drainage to watercourses or ditches within the Stour catchment. Stage 2 Appropriate Assessment required. On site works will achieve nutrient neutrality therefore no residual effects will	On-site mitigation is outlined which ensures nutrient neutrality. No assessment beyond Stage 2 required.

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
							remain. The HRA is completed at Stage 2.	
The Swale Ramsar	25.2km N	Criterion 2 (supports threatened ecological communities), including: • nationally scarce plants e.g. *Bupleurum tenuissimum, Carex divisa, Hordeum marinum* and *Spartina maritima*. • at least seven red data book invertebrates e.g. *Bagous cylindrus, Erioptera bivittata, Lejops vittata, Peocilobothris ducalis, Philonthus punctus, Micronecta minutissima, Malchius vulneratus, Campsicnemus majus, Elachiptera rufifrons* and *Myopites eximia* • the Mediterranean gull *Larus melanocephalus* Criterion 5 (regularly supports >20,000 waterbirds); in the winter the site supports 77,501 waterbirds (5-year peak mean 1998/99 – 2002/03). Criterion 6 (regularly supports 1% individuals in the population of the following species): • Ringed plover *Charadrius hiaticula*; 917 individuals in spring/autumn (1.2% of the Europe/Northwest Africa population) • Black-tailed godwit *Limosa limosa islandica*: 1504 individuals in winter (4.2% of the Iceland/W Europe population) • Eurasian wigeon *Anas Penelope:* 15296 individuals in winter (1% of the NW Europe population) • Northern pintail *Anas acuta:* 763 individuals in winter (1.2% of the NW Europe population)	Threats identified on the Site Improvement Plan include: • Coastal squeeze • Public access/disturbance • Illicit vehicle use • Invasive species • Fisheries: commercial marine and estuarine • Changes in species distributions • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment This site is located approximately 25.2km north of the proposed Development. In line with the assessment provided for the Dover to Kingsdown Cliffs SAC, the low visitor numbers predicted from the proposed Development residents due to, surveys indicating a limited travelling distance (approx. 20 minutes drive) the distance of the site from the proposed Development and the proximity of over 50% accessible greenspace within the proposed Development , make significant effects due to recreational pressure extremely unlikely. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present with surveys undertaken for the proposed Development area nor was habitat within the proposed Development area suitable for supporting or maintaining significant numbers of qualifying features. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 11	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
		• Northern shoveler *Anas clypeata*: 483 individuals in winter (1.2% of the NW & C Europe population)						
The Swale SPA	25.2km N	Qualifies under article 4.1 of the Directive (2009/147/EC), as it is regularly used by >1% of the UK population of the following Annex I species: • Marsh Harrier *Circus aeruginosus* • Mediterranean Gull *Larus melanocephalus* • Avocet *Recurvirostra avosetta* • Bar-tailed Godwit *Limosa lapponica* • Golden Plover *Pluvialis apricaria* • Hen Harrier *Circus cyaneus* Qualifies under article 4.2 of the Directive (2009/147/EC), as it is regularly used by >1% of the biogeographical populations of the following migratory species: • Ringed Plover *Charadrius hiaticula* • Black-tailed Godwit *Limosa limosa islandica* • Grey Plover *Pluvialis squatarola* • Knot *Calidris canutus* • Pintail *Anas acuta* • Redshank *Tringa totanus* • Shoveler *Anas clypeata,*	Threats identified on the Site Improvement Plan include: • Coastal squeeze • Public access/disturbance • Illicit vehicle use • Invasive species • Fisheries: commercial marine and estuarine • Changes in species distributions • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment This site is located approximately 25.2km to the north of the development proposed under Policies SS6 and CSD9 and therefore, in line with the reasoning provided above for the Dover to Kingsdown Cliffs SAC, the distance between these locations is considered sufficient to negate impacts associated with recreational pressures. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present with surveys undertaken for the proposed Development area nor was habitat within the proposed Development area suitable for supporting or maintaining significant numbers of qualifying features. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	
Tankerton Slopes and Swalecliffe SAC	29.5km N	Annex II species that are a primary reason for selection of this site: 4035 Fisher's estuarine moth *Gortyna borelii lunatawye* Tankerton Slopes and Swalecliffe supports the majority of the north Kent population of this moth which is approximately 20% of the UK population.	There is no Site Improvement Plan for this site but NE have indicated that the sites are sloped and contain tall grassland and hogs fennel plants making them unattractive and difficult for people to access especially when compared with the well maintained paths and amenity grassland adjacent.	Scoped in for assessment This site is located approximately 29.5km to the north-east of the development proposed under Policies SS6 and CSD9 and therefore, in line with the reasoning provided above for the Dover to Kingsdown Cliffs SAC, the distance	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be	Scoped out for assessment Too distant from the proposed Development for any significant effect direct effect on habitats (over 29.5km away);	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
		The site's north facing slopes are composed of London Clay and support a tall herb community dominated by its food plant hog's fennel *Peucedanum officinale*, together with areas of neutral grassland also required by the species for egg laying.		between these locations is considered sufficient to negate impacts associated with recreational pressures. Screened out at stage 1	assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	No sufficiently mobile qualifying features present that would use the site as functionally linked land;		
Thanet Coast and Sandwich Bay Ramsar	26.5km NE	A coastal site, consisting of a long stretch of rocky shore, adjoining areas of estuary, sand dune, maritime grassland, saltmarsh and grazing marsh. The wetland habitats support 15 British Red Data Book invertebrates, as well as a large number of nationally scarce species. The site attracts internationally important numbers of turnstone *Arenaria interpres*, and nationally important numbers of nationally important wintering populations of four wader species: ringed plover, golden plover, grey plover and sanderling, as well as Lapland bunting. The site is used by large numbers of migratory birds.	• Vegetation succession • Recreation • Water diversion for irrigation/domestic/industrial use • Eutrophication • Pollution – pesticides/agricultural runoff • Recreational/tourism disturbance (unspecified) • Unspecified development: urban use	Scoped in for assessment This site is located approximately 26.5km to the north-east of the development proposed under Policies SS6 and CSD9 and therefore, in line with the reasoning provided above for the Dover to Kingsdown Cliffs SAC, the distance between these locations is considered sufficient to negate impacts associated with recreational pressures. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present with surveys undertaken for the proposed Development area nor was habitat within the proposed Development area suitable for supporting or maintaining significant numbers of qualifying features. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	

Protected Site	Approximate distance from study area (km)	Qualifying features	Existing vulnerabilities	Recreational Pressure	Air Quality	Functionally Linked Land	Water pollution	Appropriate Assessment Outcome
Thanet Coast and Sandwich Bay SPA	28.5km NE	Qualifies under article 4.2 of the Directive (2009/147/EC), as it is regularly used by >1% of the biogeographical populations of the following migratory species: • Turnstone *Arenaria interpres*	Threats identified in the Site Improvement Plan include: • Changes in species composition • Invasive species • Public access/disturbance • Water pollution • Fisheries: commercial marine and estuarine	Scoped in for assessment This site is located approximately 28.5km to the north-east of the development proposed under Policies SS6 and CSD9 and therefore, in line with the reasoning provided above for the Dover to Kingsdown Cliffs SAC, the distance between these locations is considered sufficient to negate impacts associated with recreational pressures. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Significant numbers of species that form qualifying features of the site were not present with surveys undertaken for the proposed Development area nor was habitat within the proposed Development area suitable for supporting or maintaining significant numbers of qualifying features. The is evidenced in Sections 5.2 and 6.3 this chapter and ES appendix 7.15 and 7.16. Screened out at stage 1	Scoped out for assessment. Site is not hydrologically connected to the proposed Development site.	
Wye and Crundale Downs SAC	5.8km N	Annex I habitats that are a primary reason for selection of this site: • 6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)	Threats identified in the Site Improvement Plan include: • Overgrazing • Inappropriate scrub control • Air pollution: impact of atmospheric nitrogen deposition	Scoped in for assessment Was identified by stakeholders for assessment. Visitor surveys undertaken by Arcadis identified that a significant proportion of people use particular walking routes because of the proximity to their home and/or within 20 minutes maximum drive time. The proposed Development includes a large proportion of publicly accessible open space and high-quality green infrastructure (over 50%) which is integral to the development. This includes parks, landscape areas and habitats. It is therefore likely that a significant proportion of those seeking recreational activity including dogwalkers in particular, will utilise the spaces and routes within the proposed Development for regular activities. Screened out at stage 1	Scoped in for assessment Site is not within 200m of roads which meet any of a set of traffic change criteria as impacts from traffic emissions must be assessed. The change criteria are set at: • a change of +/- 1000 vehicles per day, • +/- 200 Heavy Duty Vehicles (HDV), • 10kph change in daily average speed or 20kph change in peak hour speeds. Screened out at stage 1	Scoped in for assessment No likely significant effects are anticipated to any of the qualifying features of the SPAs or Ramsar sites within 30km, as a result of the proposed Development. Habitats that form qualifying features of the site were not present on the development in significant quantities. Qualifying features are not mobile and as such there is no functionally linked land on the development. Screened out at stage 1	Scoped ~~out~~in for ~~assessment~~. Appropriate Assessment relating to recreational impacts. Site is not hydrologically connected to the proposed Development site.	Once the variety of recreational opportunities that are provided on site at Otterpool Park together with existing management practices at the SAC and the results of the recreational surveys relating to visitor behaviour are considered it is concluded that there are no adverse effects on site integrity.

Appendix B: Natural England DAS letter (ref DAS/11529/202390)

Appendix C: Arcadis Scoping letter (May 2018)

Appendix D: Email conversation with Natural England to agree surveys for recreational pressure

Appendix E: Natural England Feedback on the 2019 submission

Appendix F: Arcadis memo on approach to nutrient neutrality (Jan 2021)

Appendix G: Correspondence with Natural England Regarding Nutrient Neutrality

Appendix H: Correspondence with Natural England Regarding the Air Quality Assessment (emails)

Appendix I: Natural England comments on the Arcadis approach to Stodmarsh SAC SPA and Ramsar Site - Neutrality Proposals for Otterpool

Appendix J: Statement of Common Ground – Folkestone and Hythe District Council and Natural England

Appendix K: Local Plan HRA 2019 Addendum (deferred to in relation to Air Quality)

Appendix L: Nutrient Budget Analysis Update

Appendix M: Natural England Comments on the Application Received 05 August 2022

Appendix N: Further Advice from Natural England

Appendix O: Previous Reponses to Natural England Comments Dated 05/08/2022

Appendix P: Natural England Comments on the Nutrient Neutrality Update Dated July 2022

Appendix Q: Justification for the rationale that N deposition reduces in all future modelled scenarios

Section 1: JNCC (2020) 'Nitrogen Futures' Report[10]

In October 2020, the Joint Nature Conservation Committee (JNCC) published the findings of a project concerning future trends in nitrogen deposition. The project sought to develop the evidence base on the effectiveness of spatial targeting of mitigation measures and to test a range of potential options for future UK policy development. The study developed detailed scenarios which compared the existing baseline (taken to be 2017) with future scenarios in 2030 and beyond at existing or varying levels of ambition with regards to direct or indirect nitrogen deposition mitigation. Outputs were modelled across the UK, as well as in England using a national model at a 1km resolution. The study also included analysis on the local scale for a small number of designated ecological sites in order to determine whether a national scale model could accurately identify atmospheric N deposition pressures at the local scale. The modelling included the contribution of ammonia to nitrogen deposition from transport sectors, as well as the more well-understood sectors such as agriculture.

A range of scenarios were modelled including the existing 2017 baseline, the 2030 'most likely' scenario whereby the National Emissions Ceiling Regulations (referred to as NECR NOx) target was met for NOx, and a 2030 'business as usual' (BAU) scenario whereby only currently adopted policy was accounted for; this scenario is therefore likely to be pessimistic as it expected that further policy and mitigations would be adopted between 2017 and 2030. The change in NOx and NH3 concentrations was modelled as well as consequent nitrogen deposition rates (which accounts for the NOx and NH3 precursors).

In the BAU scenario, NH3 emissions increase between 2017 and 2030 by 1%. NOx emissions are expected to decrease by approximately 34%. Consequently N deposition is expected to decrease by approximately 14% by 2030 in the BAU scenario representing the ongoing application of existing emission reduction commitments. If the 'most likely' NECR NOx scenario is achieved then it is expected that there would be a decrease in nitrogen deposition of approximately 21% by 2030. The results for nitrogen deposition are shown in Table 3-3 of the JNCC Nitrogen Futures report as displayed below.

Table 3-3. Summary of N deposition to the UK land area for the 2017 and 2030 baseline scenarios, split into the main components of wet, dry, reduced and oxidised nitrogen (kt N). The data represent grid square average N deposition, i.e. the land cover within each model grid square is taken into account to provide land cover dependent total deposition.

Scenario (all values kt N)	NHx-N dry	NHx-N wet	NOy-N dry	NOy-N wet	Total N
2017 Baseline	75.3	93.8	34.6	73.3	277.1
2030 Baseline BAU (WM)	76.1	86.5	22.8	54.1	239.5
2030 Baseline NAPCP+DA (NECR NOx)	67.2	79.7	20.9	51.4	219.1

Figure 3-5 of the JNCC Nitrogen Futures report is presented below and demonstrates that the eastern areas of Kent (including the air quality study area as assessed in the Environmental Statement for the proposed Development) are expected to experience a decrease in nitrogen

[10] https://data.jncc.gov.uk/data/04f4896c-7391-47c3-ba02-8278925a99c5/JNCC-Report-665-FINAL-WEB.pdf

deposition in the range of 1 to 2.5 kg N ha yr in the BAU scenario by 2030. In the NECR NOx scenario the decrease is expected to be more substantial, in the range of 2.5 to 5 kg N ha yr.

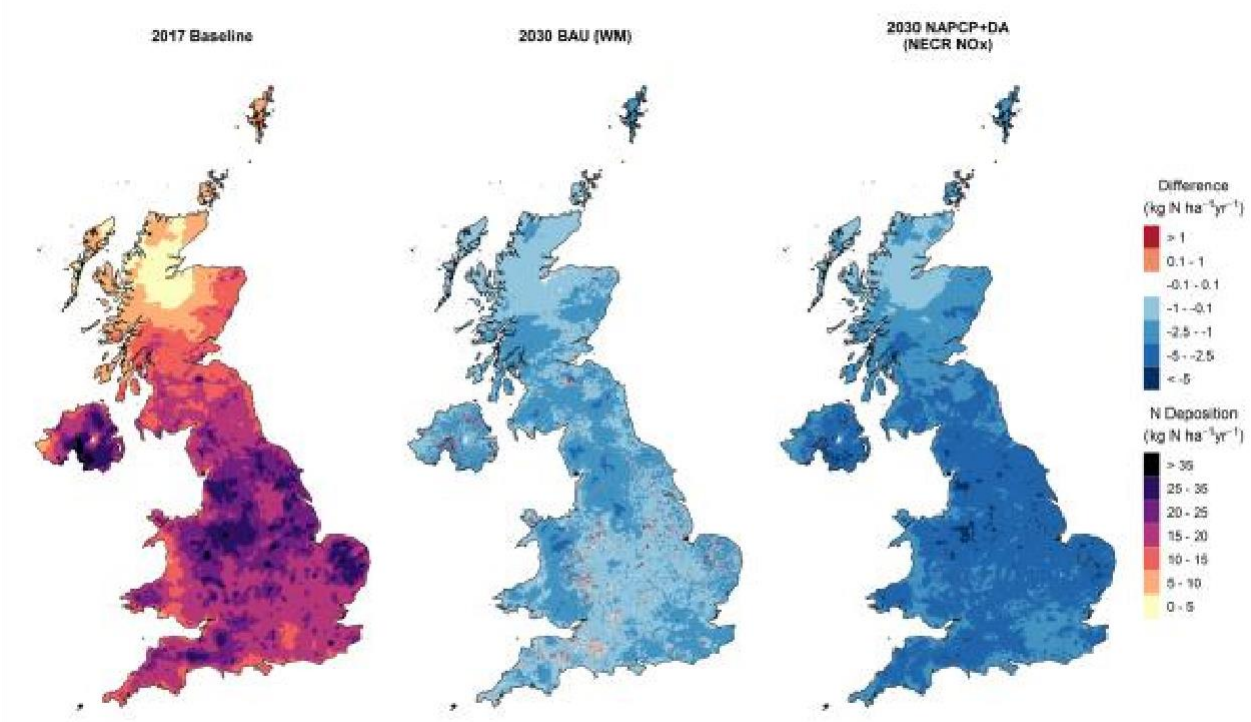


Figure 3-5. N deposition to low-growing semi-natural vegetation features - baselines: 2017 (left), difference to 2030 BAU (WM) (middle), difference to 2030 NAPCP+DA.

No BAU scenario was modelled for 2040. However, a range of further scenarios adopting different types of as yet unadopted emissions mitigation were assessed for 2040 in the 1x1km modelling. In all of the 2040 scenarios, the results showed that nitrogen deposition totals were lower in 2040 than both the 2030 NECR and BAU scenarios, and lower than the 2017 baseline, indicating that further reductions could potentially be achieved with further interventions.

In addition to the national work carried out, local case studies were presented at series of discrete ecological sites to test whether the national scale trends reported between the 2017 and 2030 scenarios in the 1x1km model would be replicated at a local scale where local issues such as intensive agriculture or road traffic were known to be an issue. Four of the case studies were modelled on the basis that they were known or expected to be substantially affected by road traffic emissions. One of these sites was Ashdown Forest SAC located in East Sussex approximately 50 miles west of the proposed Development, and was considered to be the most representative of the case studies with regards to the Folkestone to Etchinghill SAC, followed by the Epping Forest SAC case study.

The Ashdown Forest SAC was modelled at a 2m resolution for the 2017 and 2030 scenarios to ascertain whether the trends modelled at a 1km resolution (I.e. decreasing between 2017 and 2030) were replicated at the local scale, including those roadside environments within the site where road traffic emissions are substantial. The results showed that the roadside areas of the SAC are dominated by nitrogen deposition from traffic emissions of NOx and NH3, and total nitrogen deposition was greater in these locations than the 1km model. The areas further away from roads show less significant contributions from road traffic emissions. This was to be expected given the greater granularity of the 2m modelling. The 2m results showed that there are expected to be decreases in nitrogen deposition across the site (even at those

roadside locations) between the 2017 baseline and the 2030 BAU/2030 NECR NOx scenarios as the policies and existing commitments embedded in these 2030 scenarios cover a range of sectors, including road transport that leads to a net improvement in nitrogen deposition at all locations within the site.

Figure 3.1-23 of Annex 5 of the JNCC report shows that even at the 2m modelled resolution (as well as the 1km resolution) that site mean and maximum nitrogen deposition rates (i.e. those at the roadside) within Ashdown Forest SAC are expected to be lower in the two most pessimistic 2030 scenarios (BAU, and NECR NOx) than in the 2017 baseline.

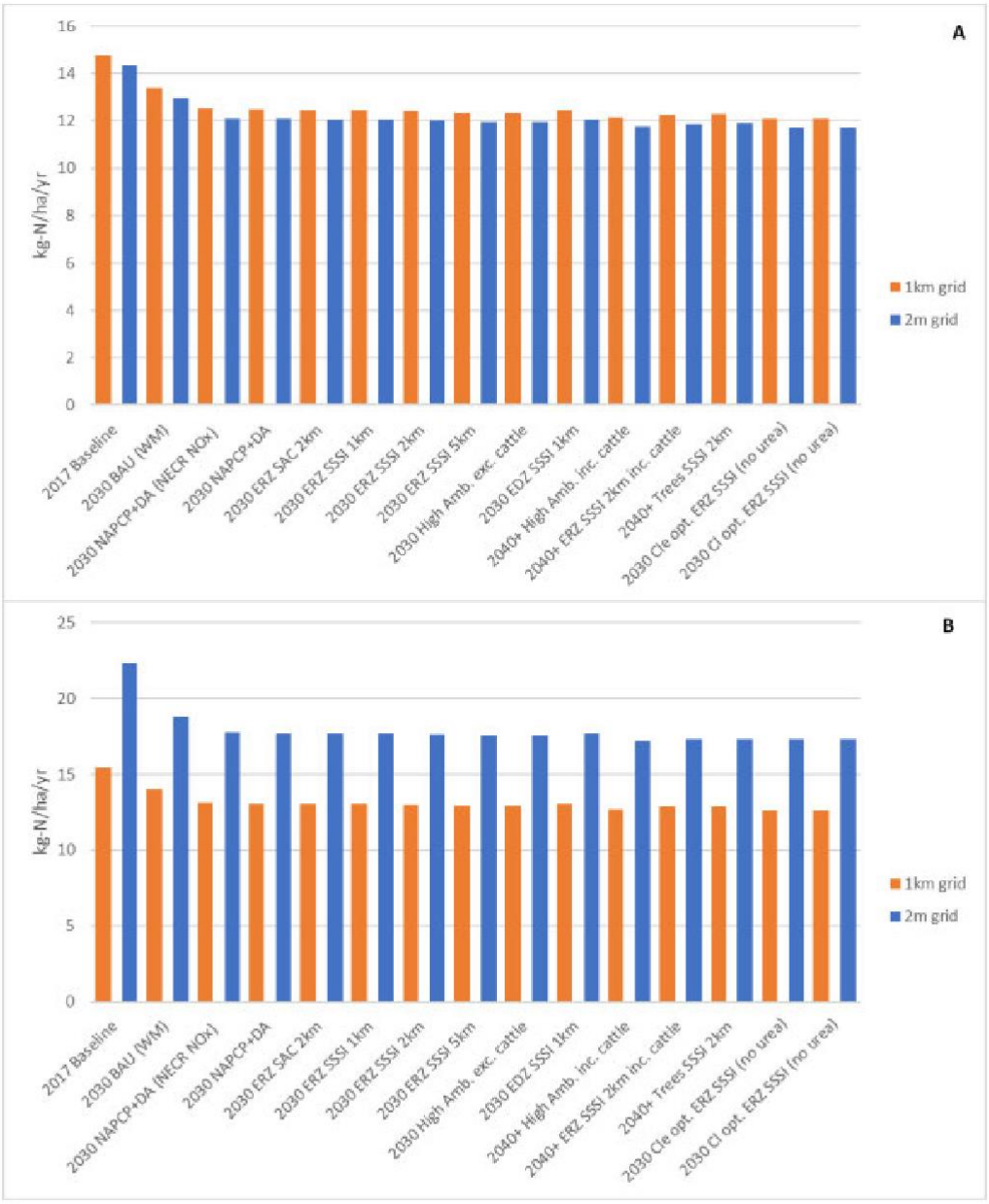


Figure 3.1-23. Comparison 1 km² and 2 m² grid predictions – N deposition to low-growing vegetation within SAC: A) mean; and B) maximum.

Similar work was carried out at Epping Forest SAC (a site dominated by woodland in London). However, an additional sensitivity analysis was carried out to establish the impact of road traffic on nitrogen deposition of achieving NOx reductions beyond 2030, in the period up to 2040, through a) the petrolisation of the fleet (which serves to increase ammonia induced nitrogen deposition) or b) through the electrification of the fleet. Figure 3.4-25 of Annex 5 of the JNCC report shows that maximum modelled nitrogen deposition rates within the Epping Forest SAC site (i.e. those closest to busy roads) are lower in 2040 than the 2017 baseline in all future scenarios regardless of whether NOx reductions are secured through the petrolisation or electrification of the traffic fleet. The 2040 modelled scenarios could lead to higher site maximums than 2030 if NOx is reduced through petrolisation of the traffic fleet rather than the

electrification of the fleet due to the increase in nitrogen deposition from ammonia associated with petrol vehicles; however these are still lower than the 2017 baseline rates of nitrogen deposition. Should fleet compositions not change between 2030 and 2040, or should NOx reductions be secured through electrification, then it is expected that site maximum nitrogen deposition rates would be lower than the 2030 BAU scenario in all of the 2040 scenarios.

Nitrogen Futures - Annex 5: Local Assessment - case studies

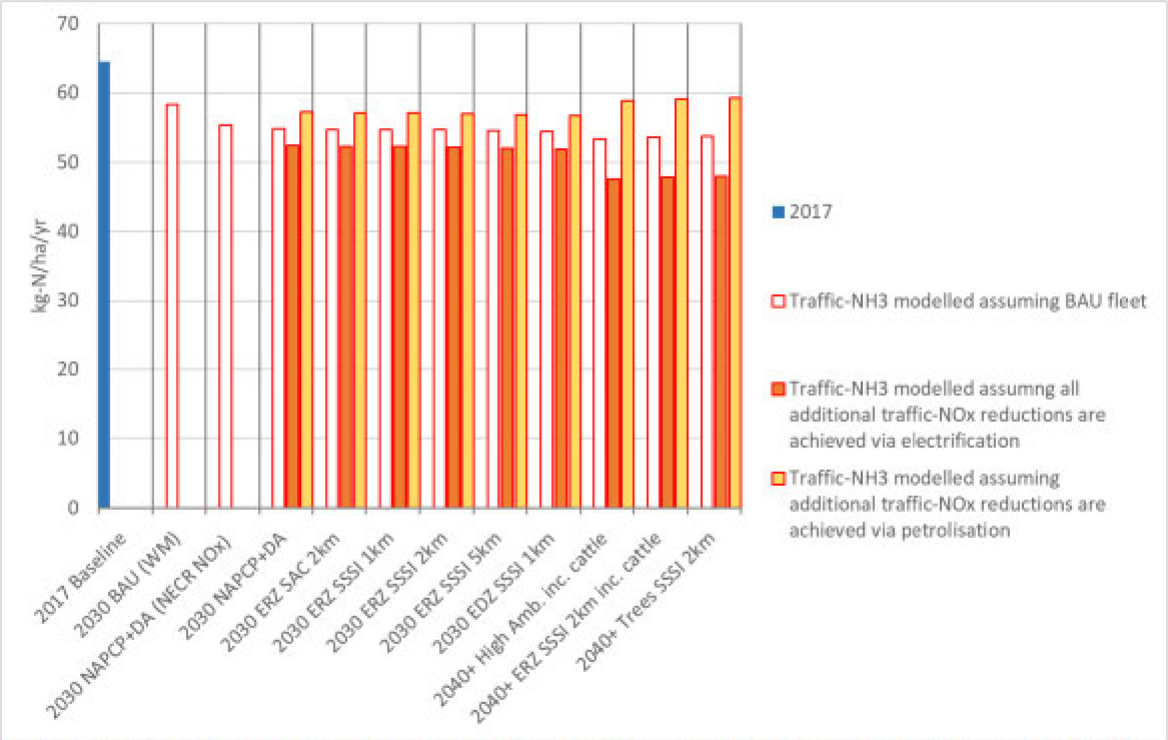


Figure 3.4-25. Effect of alternative assumptions for NH_3 emissions from local traffic on maximum predicted N deposition to woodland (selected scenarios only).

Implications for assessment of nitrogen deposition at Folkestone to Etchinghill SAC

It is accepted that according to the JNCC nitrogen futures report that there is uncertainty over NH3 induced nitrogen deposition in locations dominated by traffic emissions after 2030 due to the differing possible means of securing NOx reductions, although it should be noted that the report was published before the UK government published the Transport Decarbonisation Plan. This plan seeks to accelerate the phasing out of petrol and diesel vehicles, something that was not incorporated into the modelling informing the JNCC report or Defra's current Emission Factor Toolkit (EFT v.11).

The uncertainty around ammonia after 2030 lends itself to approaching ammonia emissions periodically over time (i.e. on a tier by tier basis) as the evidence base evolves, however it is clear that nitrogen deposition rates in roadside locations will be lower in 2030 and 2040 than in the 2017 baseline regardless of whether the analysis undertaken is on a national or local scale. This should provide reassurance that should nitrogen deposition increase at ecological sites as a result of the proposed Development in future years, it would be at lower loading rates than existing loading rates. This adds strength to the argument that if a site is deemed to be in

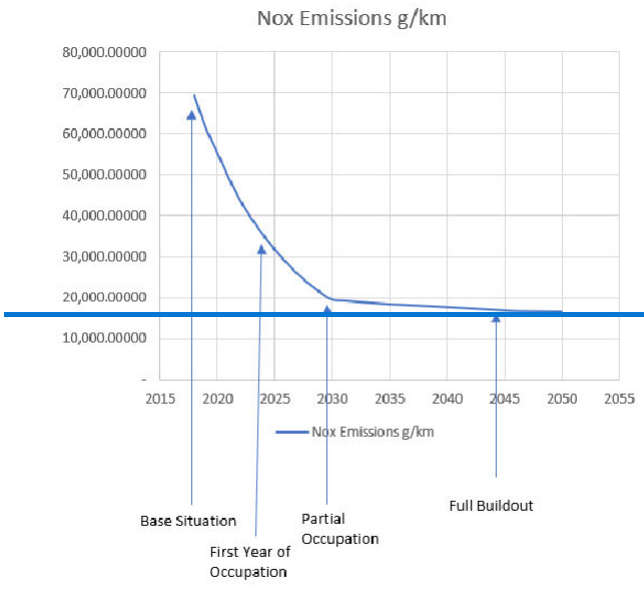
a favourable condition or has ‘maintain’ conservation objective with existing nitrogen deposition rates, it should still be in a favourable condition in the future provided that any increases in nitrogen loading associated with the proposed Development are at total levels less than the existing baseline.

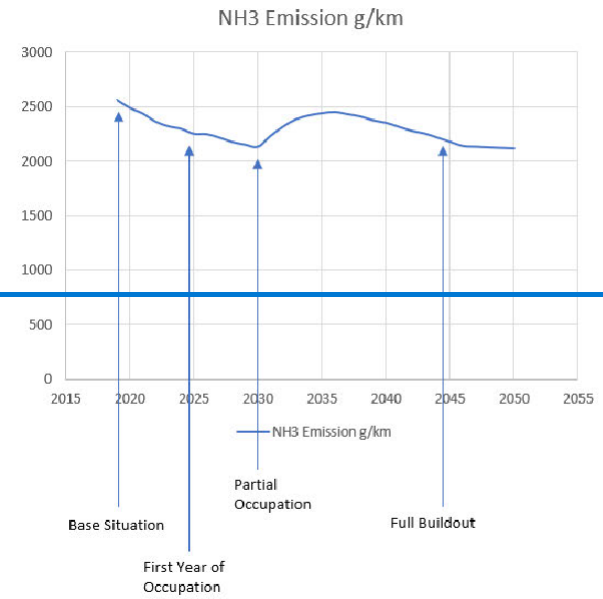
Section 2: Reduction in vehicle emissions ~~with time.~~over time according to existing air quality modelling tools

As the vehicle fleet gets cleaner over time there is a significant reduction in NOx emissions from both Light Duty Vehicles (LDVs) (Cars and Vans) and Heavy-Duty Vehicles (HDV, comprised of HGVs and Buses).

Ammonia (NH3) is generated from vehicles as a result of the technologies that control the emissions of other pollutants such as Oxides of Nitrogen (NOx). Per vehicle NOx emission rates from diesel vehicles are higher than petrol vehicles. However, NH3 is mainly emitted from petrol vehicles[11]. Both NOx and NH3 ultimately contribute to N deposition from vehicle emissions.

To demonstrate how emissions of NOx and NH3 change in the future in the context of the existing air quality modelling tools, the Defra Emission Factor Toolkit (EFT) was used for a dummy traffic flow of 150,000 Annual Average Daily Traffic (AADT), 15% of which are HDVs to represent a motorway flow. A growth in traffic of 1% per annum has also been assumed. These are shown below against the assessment scenarios ~~we have~~ modelled ~~for Otterpool~~in the Environmental Statement which were primarily driven by effects on human health. ~~This is shown below. The Governments~~The UK Government's published emission factor toolkit does not include emission factors for NH3, for the use in air quality modelling. National Highways reviewed available published evidence on NH3 vehicle emissions which included National Highways vehicle emission testing. Following completion of this review a set of NH3 ratios were developed to be applied to the outputs of the modelled NOx concentrations for different road types (Urban, Motorway or Rural). This allows for the total N Deposition to be generated from the road traffic (NO2 + NH3) and it is this figure that is used to create the projections below.





[11] GetFile.aspx (aqconsultants.co.uk)

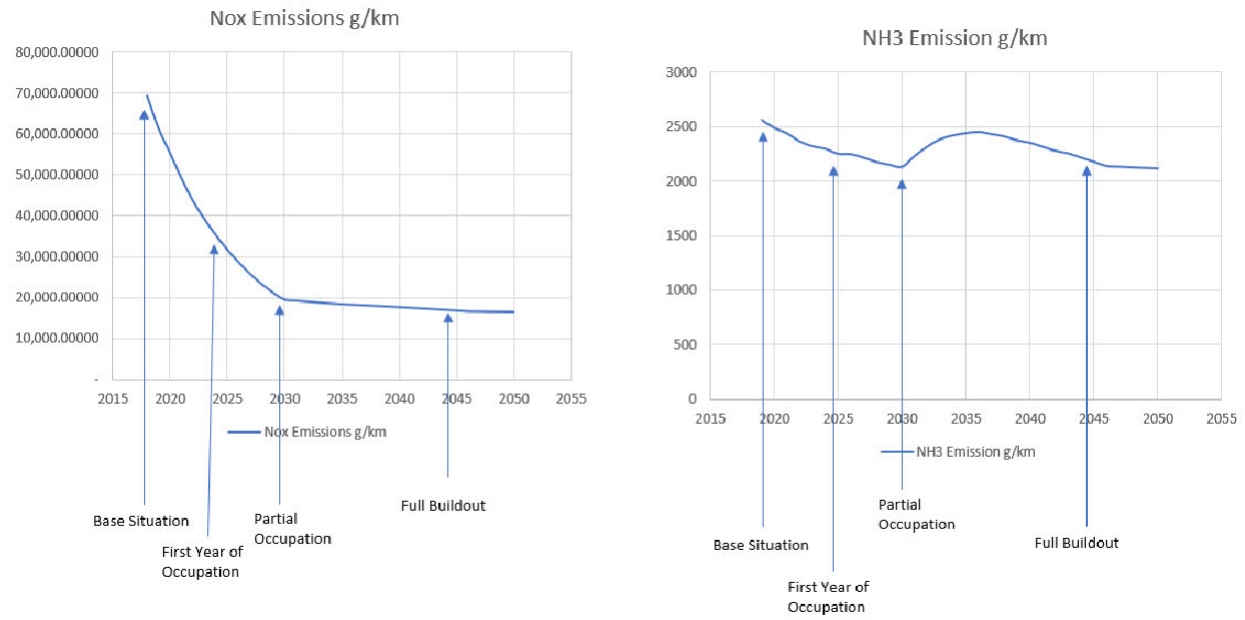


Figure A – Future NOx emissions in EFT v.11 (left) and NH3 emissions in National Highways NH3 tool

NOx falls rapidly between 2018 (the baseline modelled in the Environmental Statement) and 2030 and then flattens out as the reductions in NO_X become dependent on electric vehicles entering the fleet. NH_3 has a different pattern; it too reduces from 2018 to 2030, but as the NOx flattens out and there is a transition in the fleet to fewer diesel vehicles and other vehicles such as petrol hybrids, NH3 emissions start to increase. Emissions rise again between 2030 and 2035 (albeit to a level lower than the base situation) and then fall thereafter. N Deposition will therefore fall between 2018 and 2030 for both pollutants. N deposition however will have peaked from road traffic reducing until 2030, there will then be an increase in N deposition between 2030 and 2035 after which N deposition will start to reduce again.

The baseline situation for Otterpool (for the air quality modelling ~~ES~~detailed in Chapter 6 of the Environmental Statement) was 2018, N deposition in all ecological sites will be lower in the future scenarios modelled when compared to this year. Unless there is a new road or a significant increase in traffic flows that outweigh the general improvements in emissions.

It should be noted that if there is a faster uptake of electric vehicles in the fleet than is currently predicted in Defra's EFTv11 (issued November 2021) then there will also be a faster reduction in emissions of NOx and NH_3 than that graphed above in figure 1.

~~Arcadis UK~~

Section 3: The Transport Decarbonisation Plan (TDP)

It should be noted that the JNCC analysis (as summarised in section 1) and EFT v.11 (summarised in section 2) were published prior to the publication of the Transport Decarbonisation Plan, and therefore do not account for the policies within this plan such as accelerated phasing out of petrol and diesel vehicles.

The calculations detailed in section 2 of this appendix regards the change in NOx and hence NH3 emissions based upon the latest version of the EFT version 11. This includes fleet projections up to 2050 and the projected vehicle fleet mix (petrol, diesel, electric, etc). The fleet projections that underpin the emissions in EFT v.11 are based on traffic projections from the Department for Transport's (DfT's) Road Traffic Forecasts 2018. With regard to the phasing out of petrol and diesel vehicles in the future (for example Ultra Low Emission Vehicles), page 30 of the Road Traffic Forecasts 2018 report states:

'These forecasts include implemented and adopted policies only. These do not include future policies or Government ambitions that have not been legislated, for example it does not include future car and van CO2 regulations.'

Therefore, whilst the fleet projections used to generate emissions factors from the EFT do take account of the projected change in the mix of vehicles (petrol, diesel, electric, etc.), these are based on adopted policies. Policies that would lead to an accelerated phasing out of petrol and diesel vehicles, such as the Transport Decarbonisation Plan, which was published in 2021, are not accounted for in the emissions factors generated using EFT v11. The effects presented in the calculations summarised in section 2 are therefore likely to be worst case scenario and it is reasonable to assume that the impact of the TDP would be a reduction in vehicle tailpipe emission of NOx and NH3 than is currently assumed based off EFTv11.

Appendix R: AECOM Advice to the LPA regarding Air Quality Impacts on Folkestone to Etchinhghill Escarpment

AECOM Limited
Midpoint, Alencon Link
Basingstoke
Hampshire RG21 7PP
United Kingdom

T: +44(0)1256 310200

[redacted]

Approach to assessing road traffic contributions of ammonia - December 2022

Dear James,

As requested, below presents a review of the proposed approach to assessing the impact of road sources of ammonia, and the impact upon designated sites within 200m of the road. Documents submitted as part of the 2022 Otterpool Park Outline Planning Application (updated)[1] Y19/0257/FH have been reviewed. This review, and observations presented below, have focussed on the following two documents:

OP5_Appendix_7.19_Habitats_Regulation_Assessment v5.2_Part_1_R_November_2022_v2.pdf (folkestone-hythe.gov.uk)
OP5_Appendix_7.19_Habitiats_Regulation_Assessment_v5.2_Part_5_November_2022.pdf (folkestone-hythe.gov.uk)

Natural England provided comments regarding the March 2022 submission, received 5 August 2022 (Appendix M), and advised that road sources of ammonia should be included in the air quality assessment that informs the Environmental Statement and Habitats Regulation Assessment.

Subsequent consultation (9 September 2022, Appendix N) confirmed that, given ammonia assessment is a new and developing topic, Natural England are satisfied with the proposal to include ammonia in subsequent tiers of assessment, once assessment methodologies are more settled, rather than update the modelling at this stage. This will provide Natural England with the opportunity to comment further, and for the local authority to ensure that the Folkestone to Etchinghill Escarpment SAC continues to be protected.

As the approach to include road sources of ammonia in future tier assessments has already been agreed with Natural England as being an appropriate approach to protecting the integrity of the SAC, it is not necessary to undertake further modelling at this stage. Within the documents, the applicant's comments are welcomed, stating:

> '*in order to provide further certainty, it is recommended that the potential impact from nitrogen deposition is screened at a subsequent stage of the tiered planning process, and that updated air quality assessments are conducted utilising the emerging ammonia modelling tools and updated DEFRA toolkits as they are issued*'.

Paragraph 6.2.16 of the HRA report states that:

> '*The applicant is committed to monitoring the air quality position at future delivery milestones through the submission of ES updates at each phase of the development (note: NE will be consulted on these submissions as a matter of course, enabling further evidence to be presented at future relevant stages). For each submission, we will be able to take into account that phase*

[1] https://www.folkestone-hythe.gov.uk/otterpool-park/2022-otterpool-park-outline-planning-application-updated

in isolation plus in-combination effects with previous phases, using real world data and the most up to date emission factors.'

However, further information is presented in Appendix Q; the analysis uses the National Highways ammonia tool, which calculates ammonia emissions directly from road traffic emissions of NOx and is as yet unpublished, but has been reviewed by the Institute of Air Quality Management (IAQM). Reasoning behind the use of the tool, as opposed to alternative methodologies, is presented.

The analysis presented in Appendix Q of the HRA illustrates that projected emissions of ammonia on a hypothetical motorway are expected to be lower in future years than 2019, accounting for 1% growth in traffic flow per year. This is subsequently extrapolated to say that '*projected ammonia deposition is lower than the current baseline in future scenarios*' (Executive Summary) and '*it is likely that ammonia levels will reduce from the road at the SAC in question over the assessment period with and without the proposed new garden settlement*' (paragraph 6.2.16). However the analysis shows only road traffic sources of ammonia (leaving aside agricultural sources for example) and does not account for the Otterpool Park development traffic beyond the 1% per annum growth, thereby not providing enough evidence to confirm that '*ammonia deposition will reduce in all future scenarios with or without the development*'.

This does not follow Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (NEA001[2]), which follows a stepwise screening approach. In particular, Step 4 requires the application of screening criteria, including 1% of the critical level / load, to conclude no Likely Significant Effect (LSE). Exceedance of 1% of the critical level / load does not automatically imply environmental effects – subsequent ecological interpretation is required to ascertain the possible environmental impacts.

Furthermore, paragraph 6.2.15 states that '*the Otterpool Park application ES (Chapter 6: Air Quality) presents a thorough and robust assessment of air quality impacts over the delivery of the development, culminating in the assessed 'worst-case' scenario in 2044 when full development build out is anticipated*.' However Appendix Q indicates that ammonia emissions from road traffic will be higher in 2030 than in 2044 when the full development build out is anticipated. It therefore does not necessarily follow that 2044 is the 'worst-case' scenario, even if ammonia emissions were taken into account.

No further information has been provided as to how the assessment of road traffic sources of ammonia, and the subsequent contribution to nitrogen deposition, will be undertaken in future assessments; however, this is not considered necessary at this stage (particularly due to the evolving methodology), provided that any outline planning consent includes a condition requiring the air quality assessment of the SAC to be updated prior to the grant of any reserved matters consents, taking account of impacts alone and in combination including from ammonia, and thus prior to occupation of any net new dwellings. This will ensure that the SAC is protected from adverse effects on integrity.

In summary, as the approach to include road sources of ammonia in future tier assessments has been agreed with Natural England as being appropriate, it is not necessary to further screen out at this stage. At subsequent stages, the screening of impacts should be undertaken in line with Natural England guidance in order to ascertain whether impacts alone and in-combination are expected to exceed 1% of the critical level / load.

Yours sincerely,

[redacted]

Helen Venfield

[redacted]

Appendix S: Recreation Survey Data