

SUBJECT
Otterpool Park Framework Masterplan - Nutrient
Neutrality Mitigation EIP Queries

DATE
15 January 2021

DEPARTMENT
Water Management & Resilience

COPIES TO

[REDACTED]

TO

[REDACTED]

OUR REF
10029956-AUK-XX-XX-FN-CW-0027-P1

PROJECT NUMBER
10029956

FROM

[REDACTED]

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1. Introduction

This brief technical note has been prepared on behalf of Folkestone and Hythe District Council (FHDC) in response to some queries and concerns expressed by [REDACTED] in his email of 13 Jan 2021, in relation to the latest Arcadis's nutrient budget calculations and mitigation proposals for the Otterpool Park Site Allocation that were recently examined at the Core Strategy Review EIP.

2. Arcadis Response to [REDACTED] Raised Points

Point 1 – Implications of Natural England's latest Nutrient Neutrality Methodology Guidance Note (November 2020)

It is acknowledged that Natural England (NE) July 2020 guidance was updated in November 2020. However, Arcadis had several detailed consultations with NE as already set out in the Statement of Common Ground and submitted the latest calculations to NE for review on 04 November 2020. At that time, the November 2020 guidance had not been formally published. Furthermore, NE's latest response to Arcadis (dated 02 December 2020) clearly confirms that the changes made between July and November advice do not materially affect our calculations made for the Otterpool Park and Sellindge Sites – please see the highlighted extract below.

Summary of Natural England's advice

As the competent authority, Folkestone and Hythe should satisfy itself that the values chosen and assumptions made are consistent with others used in the local plan. In addition, they are sufficiently precautionary to meet the tests for assessments of plans and projects set out in the Conservation of Habitats and Species Regulations (2017) as amended (HRA). The assumptions have been updated from previous versions of the calculation to be more precautionary, and now meet those suggested in the Natural England Nutrient Neutral methodology. **Natural England updated our Nutrient Neutral methodology in November 2020 and the Otterpool and Sellindge calculations use the July version of the guidance. However, the changes made between July and November advice do not materially affect the calculations made for the Otterpool and Sellindge sites in the above documents.**

Natural England's advice is that the calculations and mitigation proposals supporting documents provided above are likely to meet the HRA tests for water quality at the plan level. Our detailed advice contained in Annex I to this letter. Our role with regards protected species is in Annex II.

Arcadis of course will refer to the latest NE guidance document when we resubmit the updated calculations to the Local Planning Authority, as part of the updated Water Cycle Study/ project level Habitat Regulation Assessment within the forthcoming Tier 1 Otterpool Park Planning Application (OPA) Documentation later this year. We will also capture the ongoing preliminary design work for the proposed wetlands as part of this updated submission.

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https://arcadis0365.sharepoint.com/teams/project-10029956/Shared Documents/20 Water/NN Assessment/Addressing Post EIP comments/Otterpool Nutrient Mitigation Analysis Update Memo_Jan 2021_P1.docx

Point 2 – Implications of Hotel (Class C1) and Extra Care Housing (Class C2)

The proposed Hotel (Class C1) and Extra Care Housing (Class C2) uses were not explicitly assessed before for the Core Strategy Review EIP purpose. However, we can confirm that the previously submitted nutrient budget calculations and proposed overall wetland mitigation provision were still precautionary as it had contingencies built in to fully accommodate such additional requirements at the later planning stages.

This is further explained below:

- As set out in Arcadis Technical Note (dated 04 November 2020), the urban area previously included in the nutrient budget assessment can be reduced by 25.2 ha to account for the extra strategic SuDS areas that are currently located outside the main designated open space. These additional strategic SuDS areas are currently being included in the emerging Otterpool Park Illustrative Masterplan although not shown in the latest parameter plans to ensure future flexibility in phasing and implementation. This adjustment to the urban area will immediately reduce the current total wetland area requirement of 22.5 ha by another 1.8 ha (i.e. revised total of 20.7 ha), due to the reduced nutrient budget from the urban storm pollutant runoff.
- On the hand, we have already identified a minimum of 24.8 ha of wetlands within the 8500 homes Tier 1 Otterpool Park OPA alone. Furthermore, additional stormwater wetland areas can be provided at the wider Otterpool Park Framework Masterplan (i.e. within 1500 homes site) and the two Sellindge Sites if required. This will supplement the stormwater wetlands that are currently being proposed at 8500 homes Otterpool Park OPA site.

We have since undertaken further calculations as set out below to address [REDACTED] recent concerns expressed for the Hotel and Extra Care Homes not being explicitly assessed before.

The current Otterpool Park Framework Masterplan has provision for:

- 8704 Class C3 residential homes
- 1296 Class C2 extra care homes
- 117 rooms Hotel Class C1

The revised nutrient budget and associated wetland requirement for the above, along with 350 homes at Sellindge Sites are set out in Table 1 and Table 2 below. The reduced TN and TP values after reducing the urban area by 25.2 ha due to additional SuDS areas in the illustrative masterplan are also shown in italics/brackets.

Table 1 Nutrient Budget Assessment Summary

| WwTW Option | PCC Rate – Scenario 1 (see Note 1) | | PCC Rate – Scenario 2 (see Note 2) | |
|--|---------------------------------------|--------------|---------------------------------------|--------------|
| | TN (Kg/year) | TP (Kg/year) | TN (Kg/year) | TP (Kg/year) |
| Otterpool Park Framework Masterplan Only | 3344 (3062) | 298 (277) | 2521 (2240) | 287 (266) |
| Otterpool Park Framework Masterplan plus Sellindge Sites CSD9A and CSD9B | 3606 (3325) | 302 (281) | 2784 (2502) | 290 (270) |

Notes

1. Per Capita Consumption (PCC) for Scenario 1:

- Residential (Class C3) = 110 l/p/d (as per NE recommendation)
- Residential (Class C2) = 350 l/p/d (as per British Water Flows and Loads – 4 Code of Practice, dated 2009)
- Hotel (Class C1) = 300 l/p/d (as per British Water Flows and Loads – 4 Code of Practice, dated 2009)

2. Per Capita Consumption (PCC) for Scenario 2:

- Residential (Class C3) = 110 l/p/d (as per NE recommendation)
- Residential (Class C2) = 262.5 l/p/d*
- Hotel (Class C1) = 225 l/p/d*

* PCC values recommended in British Water Flows and Loads – 4 Code of Practice, dated 2009 were reduced to 75% to reflect the additional water efficiency measures proposed at Otterpool Park. A similar % reduction can be seen for PCC in relation to the standard Class C3 dwellings when compared with the British Water recommended values.

Table 2 below summarises the indicative total area of the new wetlands required to offset the nutrient loading surplus shown in Table 1. The reduced wetland areas after reducing the urban area by 25.2 ha due to additional SuDS areas in the illustrative masterplan are shown in italics/brackets.

Table 2 Wetland Area Requirements

| WwTW Option | PCC Rate – Scenario 1 | | PCC Rate – Scenario 2 | |
|--|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | TN Wetland Area ¹ (ha) | TP Wetland Area ² (ha) | TN Wetland Area ¹ (ha) | TP Wetland Area ² (ha) |
| Otterpool Park Framework Masterplan Only | 3.6 (3.3) | 24.8 (23.1) | 2.7 (2.4) | 23.9 (22.2) |
| Otterpool Park Framework Masterplan plus Sellindge Sites CSD9A and CSD9B | 3.9 (3.6) | 25.2 (23.4) | 3.0 (2.7) | 24.2 (22.5) |

Upper Bound

Lower Bound

¹ Assumed TN removal rate of 93 g/m²/yr for both wastewater and stormwater discharges

² Assumed TP removal rate of 1.2 g/m²/yr for both wastewater and stormwater discharges

3. Summary

This technical note confirms that the lower bound and upper bound values for the required mitigation wetlands to ensure that the entire Otterpool Park Allocation and two Sellindge Sites are nutrient neutral varies between 22.5 ha and 25.2 ha. This now explicitly accounts for the proposed Hotel and Extra Care Housing to address recent concerns.

Sufficient area of wetlands (i.e. circa 25 ha) has been already identified at 8,500 homes Otterpool Park Tier 1 OPA site boundary to ensure this. There are further opportunities to include wetlands at the remaining 1500 homes Otterpool Park Site Allocation area and Sellindge Sites if required during the later planning application stages. Therefore, this clearly confirms that Nutrient Neutrality can be achieved at the Otterpool Park Site Allocation as per the published November 2020 NE Guidance, which follows the precautionary principle in order to protect Stodmarsh Lakes European Designated Sites.