
Water Neutrality Statement

**Kilnwood Vale, Crawley Road, Faygate, West Sussex
Phase 3DEFG – Reserved Matters Application**

Document Control

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1 Introduction

- 1.1.1 This Water Neutrality Statement (WNS) has been prepared on behalf of the applicant, Crest Nicholson South (hereafter referred to as 'Crest') to accompany a Reserved Matters Application (RMA) sought for layout, appearance, scale and access, in accordance with DC/15/2813 for Phase 3DEFG of the Kilnwood Vale development (the 'Proposed Development'), comprising of 280 dwellings including 70 (25%) affordable homes with associated landscaping, access and parking. The Proposed Development is situated at Holmbush Farm Landfill Site, Crawley Road, Faygate, West Sussex (DC/15/2813).
- 1.1.2 On 14th September 2021, Horsham District Council (HDC) received a Position Statement from Natural England (NE). Within this note, NE explain that could not conclude that water abstraction for drinking water supplies within the Sussex North Water Supply Zone (SNWSZ) was not having a negative impact on a number of designated sites including Amberley Wild Brooks Site of Special Scientific Interest (SSSI) and Pulborough Brooks SSSI. These form part of the Arun Valley Special Protection Area (SPA), Arun Valley Special Area of Conservation (SAC) and Arun Valley Ramsar site. As a result, NE advised HDC that any new development that takes place within Horsham must not add to this negative impact, i.e. all development should be water neutral.
- 1.1.3 All applications in the affected area are now expected to be supported by a Water Neutrality Statement which will help with the Appropriate Assessment, and this is a Validation Requirement in Horsham. The application site falls within the SNWSZ as defined by NE. Hence, this statement responds to water neutrality obligations set out by HDC and NE in relation to the aforementioned development, with particular emphasis placed on the planning history of this development.
- 1.1.4 Natural England (Natural England, 2022) has stated : *"for the avoidance of doubt, since the 2017 Regulations cannot be applied retrospectively, the requirement for Water Neutrality will not apply to any projects with full planning permission prior to the Natural England Statement being published in September 2021, in addition this would equally apply to not requiring future developments to mitigate the impact of those developments already granted full permission at that point."* (emphasis added).
- 1.1.5 Kilnwood Vale has benefited from outline planning permission since October 2011, has been substantially implemented, and from the evidence available, is accounted for under Southern Water's Water Resource Management Plan. More information about the scheme is provided in Section 2.
- 1.1.6 This WNS follows the guidance set out by HDC on their 'Water neutrality and planning applications' webpage, which is updated periodically as matters evolve and change (Horsham District Council, 2023a). This statement includes all of the elements that HDC expect a WNS to include.

2 Background

2.1 Kilnwood Vale

- 2.1.1 This Water Neutrality Statement accompanies a Reserved Matters Application for an area within Phase 3 of the Kilnwood Vale scheme, pursuant to the extant outline consent (DC/15/2813).
- 2.1.2 This application seeks detailed consent for the residential parcels of sub-phase 3DEFG of the Kilnwood Vale development, comprising a 6.71ha parcel for 280 dwellings including 70 (25%) affordable homes, together with associated landscaping, drainage, access and parking.
- 2.1.3 The description of development is as follows:
- “Reserved Matters approval sought for layout, appearance, scale and access, in accordance with DC/15/2813 for Phase 3DEFG of the Kilnwood Vale development, comprising of 280 dwellings with associated landscaping, access and parking.”*
- 2.1.4 For ease of reference, the application will comprise the following:
- 280 new homes (including 70 affordable homes) split across 7 sub-phases as follows:
 - Sub-phase 3D (1)
 - Sub-phase 3D (2)
 - Sub-phase 3E
 - Sub-phase 3F
 - Sub-phase 3G (1)
 - Sub-phase 3G (2)
 - Sub-phase 3G (3)
- 2.1.5 Phase 3DEFG has been designed to ensure that the development accords with the parameters, principles and objectives approved under the extant consent, to deliver a high quality living environment envisaged by the masterplan and design principles.

2.2 Water Neutrality in Horsham District

- 2.2.1 The issue of Water Neutrality in Horsham District arose in September 2021 as a result of a position statement from Natural England, referred to above, which stated that water demand within the SNWSZ might have a potential impact on internationally protected sites and species within of Arun Valley SPA, Arun Valley SAC and Arun Valley Ramsar site, most notably the impact to the Little Ramshorn Whirlpool Snail. The position statement stated that the *“Sussex North Water Supply Zone includes supplies from a groundwater abstraction which cannot, with certainty, conclude no adverse effect on the integrity of the aforementioned designated sites.”*
- 2.2.2 These sites receive statutory protection under the Conservation of Habitats and Species Regulations 2017 (the Regulations) (HM Government, 2017). These

Regulations transpose into UK legislation the ‘Habitats Directive’ 1992 (92/43/EEC) (HM Government, 1992) and the ‘Birds Directive’ 2009 (2009/147/EC) (HM Government, 2009). National planning policy in the form of the National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021) sets out that listed Ramsar sites should be considered in the same way, as if they had been classified or designated as SACs or SPAs.

- 2.2.3 The Regulations (HM Government, 2017) impose a duty on Local Planning Authorities (competent authorities) to carefully consider whether any proposals may have a significant effect on a European designation, either alone or in combination with other plans or projects. In most circumstances, permission may only be granted for a plan or project to proceed if it has been ascertained that it will not have an adverse effect on the integrity of any such designation.
- 2.2.4 The SNWSZ includes the whole of the administrative areas of HDC and Crawley Borough Council (CBC), as well as the north of Chichester District Council (CDC) and areas within the South Downs National Park Authority (SDNPA). The impact of the position statement has effectively resulted in a moratorium on the positive determination of planning applications which require mains water use in the affected areas unless water neutrality can be demonstrated.
- 2.2.5 Definitions of water neutrality often vary depending on the context in which it is used. HDC defines water neutrality as:

“Development that takes place which does not increase the rate of water abstraction for drinking water supplies above existing levels.”
- 2.2.6 Natural England gave a slightly different definition of water neutrality in its position statement: *“The definition of water neutrality is the use of water in the supply area before the development is the same or lower after the development is in place.”*
- 2.2.7 This WNS will use HDC’s definition of water neutrality, which is somewhat more precise than Natural England’s, although it is noted that it does not specify from which source the rate of water abstraction should not be increased.

2.3 Work undertaken with regards to water neutrality

The Sussex North Water Neutrality Study

- 2.3.1 In response to the issue of Water Neutrality in North Sussex, a study was commissioned by the Council which can be split into three parts: Part A; Part B and Part C (Horsham District Council, 2023b).

Part A

- 2.3.2 The first stage of the work on water neutrality relates to studies which examine the impacts on water neutrality for each local authority area on an individual basis, which is referred to as ‘Part A’ work.

Part B

- 2.3.3 The second stage, referred to as ‘*the Part B study*’, considers the total (or cumulative) impact of proposed development in all the Local Authority areas that use Sussex North Water Supply Zone (Horsham District Council, Crawley Borough Council, Chichester District Council, West Sussex County Council and the South Downs National Park). The purpose of this work is to understand how water demand may increase in the future and work out how much water will need to be ‘offset’ through Water Neutrality.

Part C

- 2.3.4 The ‘*Part C*’ - Mitigation Strategy was published in December 2022. This study builds upon and updates previous work and sets out a water neutrality strategy for all affected authorities. This includes recommending a policy approach with regards to water efficiency standards in new development and setting out principles for an offsetting scheme, which together would allow water neutrality to be met by growth identified in Local Plans.
- 2.3.5 Part C confirms that the water neutrality strategy was written in collaboration with the commissioning LPAs (HDC, CBC and CDC), South Downs National Park Authority (SDNPA), Southern Water (SW), Natural England and the Environment Agency. The strategy states that Water Neutrality is one way to allow development to proceed without increasing abstraction from sources (at Pulborough) that would have negative environmental effects on protected sites, or that the alternative approach would be to restrict growth to a level that has already been accounted for in SW’s Water Resource Management Plan (WRMP), but that this is significantly less than is currently being considered in the commissioning LPAs’ emerging Local Plans. The strategy then states that Natural England has stated, “*for the avoidance of doubt, since the 2017 Regulations cannot be applied retrospectively, the requirement for Water Neutrality will not apply to any projects with full planning permission prior to the Natural England Statement being published in September 2021, in addition this would equally apply to not requiring future developments to mitigate the impact of those developments already granted full permission at that point.”* (emphasis added) (Natural England (2022), as cited by JBA Consulting, 2022).
- 2.3.6 We understand the second part of this statement to mean that for a development granted full planning permission after 14 September 2021, it is not required to mitigate against increased demand caused by developments that were granted full planning permission prior to 14 September 2021. The first part means that water neutrality cannot be applied retrospectively to developments that were granted full planning permission prior to 14 September 2021 and therefore, any project that was granted full planning permission prior to the NE Position Statement can proceed, whether or not it can be proven that it does not increase abstraction at Hardham/Pulborough, whilst adhering to the 2017 Regulations. This statement is affected by recent case law that has established that HRA can be applied to full development that remains

subject to discharge of conditions (CG Fry & Sons Ltd vs SSLuHC, 2023), the implications of which are that some of the Part C work which discounts full permissions is (retrospectively) flawed.

- 2.3.7 The strategy highlights that in practical terms this means first reducing demand for water from the new development and then offsetting their remaining demand **or** the alternative approach would be to restrict growth to a level that has already been accounted for in SW's 2019 WRMP (paragraph 4, page 1 of the Part C Strategy) (JBA Consulting, 2022).
- 2.3.8 Within the Strategy it is stated that the LPAs affected by this issue collectively propose to deliver 19,800 homes within the emerging Local Plans, supported by additional school places and employment land. In Horsham this has been identified as 12,800 new dwellings.
- 2.3.9 To achieve water neutrality, the Strategy says that water demand should first be reduced as low as practicable, before remaining demand is offset. This is due to be achieved through the requirement of more ambitious water efficiency standards in new build houses, reducing the requirement from 110 litres per person per day to 85 litres per person per day. This allows the overall additional water demand during the Local Plan period to be reduced.
- 2.3.10 In addition, Southern Water's Water Resource Management Plan (WRMP) defines how they will maintain a balance of water supply to water demand. The Part C Strategy explains that part of the current SW WRMP (WRMP19) is a strategy to reduce water demand on the network through a reduction in household per capita consumption as well as a reduction in leakage, the targets for which are published in their Water Resources Market Information Tables (JBA Consulting, 2022).
- 2.3.11 To inform the Part C Strategy, JBA Consulting used the Water Resources Market Information Tables (2020) (Southern Water, 2020). The Part C Strategy sets out the total annual volumetric reduction in water demand arising from SW's reduction measures, which it terms 'SW contribution'.
- 2.3.12 According to the Part C Strategy, SW's WRMP19 sets out that the total SW contribution from leakage reduction through the Local Plan period (to 2038/39) is predicted to be 3.71MI/d by 2038/39, and the SW contribution from household demand reduction is predicted to be 2.28MI/d, giving a total reduction of 5.99MI/d.
- 2.3.13 The strategy then incorporates a 10% safety margin into the calculations dealing with SW's contribution, due to external factors such as Covid-19 and the 2022 drought. The reasoning for this is not clear but the SW contribution including the safety margin is subsequently reduced to 5.39MI/d by 2038/39. The year-by-year breakdown of SW's targets for water demand reduction can be found in Table 10.6 of Appendix E of the Part C Strategy.

- 2.3.14 The Strategy makes allowance for the SW contribution, which the Strategy states will offset part, but not all of the growth proposed within the emerging Local Plans.
- 2.3.15 The Strategy splits new development in the Sussex North WRZ into three different categories:
- (1) Development with extant full planning permission granted prior to 14 September 2021;
 - (2) Development without extant planning permission prior to 14 September 2021 that was included within each LPA's Local Plan Period and accounted for within SW's WRMP19; and
 - (3) Development within each LPA's *emerging* Local Plan that has not been accounted for within SW's WRMP19.
- 2.3.16 The Strategy states that water demand arising from development with extant full planning permission granted prior to 14 September 2021 (1) can be offset fully by the SW contribution, and that development without extant planning permission prior to 14 September 2021 that was included within each LPA's Local Plan Period (2) can be offset, only in part, by the SW contribution up to 2038/39.
- 2.3.17 The Strategy also explains that development with extant planning permission (1) should take priority in being offset by the SW contribution over development without extant planning permission (2) because the 2017 Regulations cannot be applied retrospectively to development with extant planning permission (1). Hence, the SW contribution must firstly be used to offset the increase in water demand arising from development with extant full planning permission granted prior to 14 September (1) before it can be used to offset development without extant full planning permission prior to 14 September 2021 (2).
- 2.3.18 The Part C strategy gives further consideration to the timing of the planned SW contribution. It calculates that the SW contribution will likely not be available to offset development without extant full planning permission prior to 14 September 2021 (2) before 2025:
- "125. There is no contribution available for Local Plan growth from SW up to 2025 (due to the existing demand from sites with full planning permission as of September 2021). After this date, a significant proportion of the new water demand from Local Plan growth would be accounted for in SW's WRMP demand reduction activities."*
- 2.3.19 After the SW contribution has been used to offset development with extant planning permission (1), which is anticipated to occur in 2025, the Part C Strategy states that if the 110 l/p/d target was maintained, 6,345 new dwellings of those without extant planning permission prior to 14 September 2021 that were included within each LPA's Local Plan Period and accounted for within SW's WRMP19 (2) could be built in Sussex North up to 2030 without increasing abstraction at Pulborough (after SW's

contribution and before offsetting), and this increases to 8,335 dwellings if the target of 85 l/p/d was adopted.

2.3.20 However, Southern Water has an agreement with Portsmouth Water to import up to 15 Ml/d of which only 6 Ml/d is currently being utilised, therefore there is an existing surplus of 9 Ml/d which can be used to offset water demand from new development at present. This means that there is no need to delay development until 2025.

2.3.21 As previously mentioned, NE advised (Natural England, 2022):

“For the avoidance of doubt, since the 2017 Regulations cannot be applied retrospectively, the requirement for Water Neutrality will not apply to any projects with full planning permission prior to the Natural England Statement being published on 14 September 2021, in addition this would equally apply to not requiring future developments to mitigate the impact of those developments already granted full permission at that point.”

Pulborough Brooks

2.3.22 Pulborough Brooks Nature Reserve is managed by the RSPB to provide the perfect condition for wildlife (RSPB, 2023). The grasslands are part of the Arun Valley floodplain and are criss-crossed by ditches which are home to some of our rarest creatures and plants. This includes the threatened little ramshorn whirlpool snail.

2.3.23 A combination of controlled flooding, grazing and hay cutting are used to manage the wet grasslands to create a healthy mosaic of grassland habitats.

2.3.24 The ditches which cross the wet grasslands need clearing out to move water around the site. This is done on rotation, to always keep some of the vegetation which lives there and give a home to rare wildlife, including the little ramshorn whirlpool snail.

2.3.25 In 2017 the ditches were the focus of a Heritage Lottery funded project “Back from the Brink” which helped create ideal conditions for the rare ramshorn whirlpool snail and other aquatic species.

Groundwater Licensing

2.3.26 Groundwater abstraction is licensed by the Environment Agency. In the case of water abstracted at Hardham, this is managed by Southern Water who apply for the right to abstract water in accordance with population forecasts associated with the relevant Local Plan, including windfall development. Such applications are accompanied by the relevant environmental information in order to allow the Environment Agency to consider licensing in light of this. Investigations and discussions between Southern Water, the Environment Agency and Natural England are ongoing. However, it is understood that groundwater abstraction from Hardham is being reduced in accordance with the Environment Agency’s ongoing management requirements.

Southern Water WRMP

- 2.3.27 SW's WRMP sets out how SW intend to supply healthy, reliable drinking water to homes and businesses across Kent, Sussex, Hampshire and the Isle of Wight (Southern Water, 2019a). The primary objective of the WRMP is to ensure that there are always enough supplies available to meet anticipated demand in the aforementioned areas under various future scenarios, taking into account the likely effects of climate change, population growth and changing environmental legislation. All water companies are required to produce a WRMP and update it every five years in accordance with the Water Industry Act 1991 (HM Government, 2023b).
- 2.3.28 The WRMP is essentially an assessment of how much water will be needed in the future so that SW can ensure sufficient future supply. To do this, SW use complex models to plan for a series of futures, based on different assumptions about the future, in particular relating to abstraction licence changes, population growth and climate change (Southern Water, 2019b). Where demand for water is greater than supply and a water deficit is forecast, SW work to: reduce demand through leakage reduction and improvements to water efficiency with the help of LPAs and the SDNPA; and to increase supply through measures such as exploring new water resources such as desalinisation, water recycling and catchment transfers (bulk imports) (Southern Water, 2019a).
- 2.3.29 Water demand arising from the Proposed Development has been accounted for in the planning of future water supply in SW's WRMP up until 2075. At the time of writing, the SW WRMP19 (2020-70) (Southern Water, 2019a) is the most up-to-date WRMP, and covers SW's plans for the supply of drinking water between 2020-70.
- 2.3.30 As previously mentioned, the WRMP19 is an assessment of how much water will be needed in the future so that SW can ensure sufficient future supply. In order to forecast how much water will be needed in the future, SW follow guidance issued by the Environment Agency (EA) and Natural Resources Wales (NRW), and recommendations from UK Water Industry Research (UKWIR) (Southern Water, 2019b; Environment Agency and Natural Resources Wales, 2017; UKWIR, 2016).
- 2.3.31 SW consider population growth and changes in household composition key drivers for demand. Their forecasts are primarily based on housing projections provided by LPAs in their supply area, including Horsham District Council. SW combine these housing projections together with micro-component analysis (MCA), which takes into account current and future domestic water use associated with different domestic activities, i.e. average water use per person per household per day, expressed in litres/person/day (Southern Water, 2019c). This results in a total demand figure based on the anticipated number of houses and anticipated domestic water consumption per person per household.
- 2.3.32 Together with their neighbouring water companies, SW commissioned a study in 2016 to provide forecasts for: total population; household population; communal

population; households; household occupancy; and residential properties (Southern Water, 2019c).

- 2.3.33 The study was completed at the start of 2017 (Experian, 2017) which resulted in the production of forecasts up to the year 2044-45 that were in line with guidance issued by the EA and NRW, and UKWIR. The guidance (Environment Agency and Natural Resources Wales, 2017) requires water companies in England to base their growth forecasts on local plans published by the LPA. The guidance states the following:
- *“If a local council has a published adopted plan that is not being revised, then the water company must take account of the planned property forecast. Water companies need to ensure that their planned property forecast and resulting supply does not constrain the planned growth by local councils*
 - *If a local council has published a draft plan but it has not yet been adopted water companies must take account and use this as the base of their forecast*
 - *If a local council has not started or published a draft plan the water company should use alternative methods such as household projections from the Department of Communities and Local Government or derive their own analysis using methodologies outlined in UKWIR 2016.”*
- 2.3.34 SW state in Annex 2 of their WRMP19 Technical Overview (Southern Water, 2019c) that *“In keeping with the guidance, we [SW] have adopted the plan-based forecast as our baseline growth forecast.”*
- 2.3.35 On 27 November 2015 HDC adopted the Horsham District Planning Framework (HDPF) (their local plan). Therefore, at the time that the study took place (2016-2017) the HDPF was the published adopted plan that was not being revised relevant to Horsham District. Hence, the relevant planned property forecast of the HDPF formed the basis of the Experian (2017) (Experian, 2017) and SW WRMP19 (2020-70) (Southern Water, 2019a) plan-based forecast, and therefore their baseline population growth forecast. This is confirmed in Figure 3.2 within the Experian (2017) Study (Experian, 2017), which cites the ‘Horsham Housing Authority Monitoring Report Mid Yearly Update May 2016’ (Horsham District Council, 2016) as the relevant data source.
- 2.3.36 The way SW planned for water resources in their draft WRMP24 (2025-75) was significantly different to the way they planned in WRMP19 (2020-70) after the National Framework for Water Resources was published in 2020 (Environment Agency, 2020). The National Framework introduced strategic regional planning, which meant that the draft WRMP24 (2025-75) was developed in close collaboration with the Water Resources South East (WRSE) group and follows the publication of its Emerging Regional Plan.
- 2.3.37 Despite changes to the way SW planned for water resources in their draft WRMP24 (2025-75) (Southern Water, 2019a), the approach to deriving their population growth baseline is largely consistent with WRMP19 (2020-70) (Southern Water, 2022). As in

WRMP19, SW together with their neighbouring water companies (which are now collectively called Water Resources South East (WRSE)), commissioned a third party, Edge Analytics, to provide population growth forecasts in line with government guidelines (WRSE 2020b). Their baseline housing-plan scenario takes into account areas or sites where housing is identified for delivery in future, not just where it currently exists; it is derived from a range of Local Plan evidence published by the LPAs (Edge Analytics, 2020).

- 2.3.38 In their draft WRMP24 Technical Report (Southern Water, 2022), SW state that they chose this method to derive baseline forecast figures as *“they represent a more realistic view of the locations of new growth, and allocate growth to WRZs more accurately.”* Therefore, the baseline population forecasts within the SW WRMP 2024 are also based on HDPF (2015) (Horsham District Council, 2015) and Draft Horsham District Local Plan (HDLP) (2019-2036) (Horsham District Council, 2023c).
- 2.3.39 In both SW’s WRMP19 and draft WRMP24, the population forecasts, derived from LPA housing forecasts, are the principal informants to their water demand forecasts (Southern Water, 2019b) (Southern Water, 2022).

2.4 Kilnwood Vale within the Water Resources Management Plan

- 2.4.1 It is clear from the Part C Mitigation Strategy that the proposed offsetting will only be required for new dwellings which would have the potential to increase abstraction at Pulborough. The strategy establishes that to 2030, between 6,345 and 8,335 dwellings can be developed (depending on efficiency targets) without increased abstraction.
- 2.4.2 The Mitigation Strategy states that it makes allowance for the demand management measures already targeted by Southern Water as part of the current Water Resources Management Plan (WRMP), and this will effectively offset part but not all of the growth proposed within emerging Local Plans. To expand on this, the Strategy states that when the current WRMP was written, available growth forecasts from the LPAs within the WRZ, based on the growth figures from adopted Local Plans at the time, were used to provide an estimate for the additional water demand. Whilst this is a lower level of growth than set by the Government’s housing standard methodology, due to overlapping plan periods, not all development set out in the adopted Local Plans has come forward and therefore this will continue to form part of anticipated growth within the WRZ. This means that some of the growth currently proposed in the emerging Local Plans has already been accounted for in the current WRMP.
- 2.4.3 Based on what is considered within the Strategy:
- a) in the period up to 2025, development that had full planning permission by 14th September 2021 does not need to show water neutrality;

- b) in the period 2025-2030, development considered in the WRMP 2019 (but did not have full permission at 14th Sept 2021) does not need to show water neutrality up to a total of 6,345 dwellings (if 110 l/p/d efficiency is assumed) or 8,335 dwellings (if 85 l/p/d is assumed); and,
- c) after 2030, development beyond the figures at (b) will also not need to show water neutrality due to the contribution from SW's additional infrastructure works by that date.

2.4.4 Phase 3DEFG of Kilnwood Vale did not have full planning permission at 14th September 2021 and is intended to be occupied after 2025 but before 2030. It is therefore necessary to consider whether Phase 3DEFG of Kilnwood Vale would fall within the 'headroom' of 6,345 - 8,335 dwellings discussed within the Strategy.

2.5 Kilnwood Vale Planning History

- 2.5.1 The Kilnwood Vale site was allocated in the West of Bewbush Joint Area Action Plan (JAAP) in 2009, for a neighbourhood of approximately 2,500 dwellings and associated uses, including retail and employment uses, a primary school, community uses, a new rail station and open space. This allocation has subsequently been taken forward in the Horsham District Planning Framework (HDPF), which was adopted in 2015.
- 2.5.2 A hybrid planning application, including a masterplan for the site, was submitted to Horsham District Council (HDC) in July 2010 and was formally approved in October 2011, following signing of the section 106 legal agreement (ref: DC/10/1612). The hybrid planning permission comprised four parts (Parts A-D). Part A comprises outline planning permission for approximately 2,500 new homes, neighbourhood centre, new rail station, pumping station, energy centre with land for employment, schools and associated access and amenity space. A full application was subsequently submitted in November 2015 for residential development on the site previously identified for the potential energy centre, as the energy centre was assessed to no longer be required in order to meet the requisite energy reduction standards (ref: DC/15/2561).
- 2.5.3 In December 2015, an application for Minor Material Amendments (MMA) to Part A of the consented scheme for Kilnwood Vale was submitted to HDC under section 73 of the Town and Country Planning Act (TCPA) to facilitate proposed improvements to the masterplan (ref: DC/15/2813). The MMA application was subsequently approved by the Council in April 2015. The planning permission for the MMA to the masterplan sits alongside the original planning permission, which remains intact and unamended.
- 2.5.4 Since planning permission was first granted in October 2011 a number of residential phases have achieved reserved matters consent and have been built out and are now occupied.

- 2.5.5 Phase 3DEFG of Kilnwood Vale forms part of Part A of the approved, hybrid, outline planning application submitted to HDC in July 2010. As the Kilnwood Vale site was allocated in the West of Bewbush Joint Area Action Plan (JAAP) in 2009, and was subsequently been taken forward in the HDPF, which was adopted in 2015 (Horsham District Council, 2015), Phase 3DEFG of Kilnwood Vale was accounted for within the HDPF (2015).
- 2.5.6 In fact, in Figure 3.2 of the Experian (2017) Study (Experian, 2017), which formed the basis of the population demand forecasts in WRMP19 (Southern Water, 2019c), Experian cite the 'Horsham Housing Authority Monitoring Report Mid Yearly Update May 2016' (Horsham District Council, 2016) as the data source to inform their study of projected population growth in Horsham District.
- 2.5.7 The Horsham Housing Authority Monitoring Report Mid Yearly Update May 2016' (Horsham District Council, 2016) provides the following trajectory for Kilnwood Vale:

		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	Total
Kilnwood Vale	Expected				149	150	150	180	180	240	230	220	200	200	150	120	2500
	Completed	0	75	76	0	0	0	0	0	0	0	0	0	0	0	0	151

- 2.5.8 This means that Phase 3DEFG of Kilnwood Vale was considered within the population and future demand forecasts as set out by SW's WRMP19. Hence, as Phase 3DEFG of Kilnwood Vale did not have extant full planning permission before 14 September 2021 but was accounted for within SW's WRMP19, it falls within the 'headroom' of 6,345 - 8,335 dwellings discussed within the Part C Strategy. Therefore, Phase 3DEFG of Kilnwood Vale can be developed without increasing abstraction.

3 Proposal as part of the Baseline

- 3.1.1 As explained in Section 2, The Sussex North Water Neutrality Study Part C highlights that in order to allow development to proceed without increasing abstraction from sources (at Pulborough), two strategies can be followed: first reducing demand for water from the new development and then offsetting their remaining demand; OR the alternative approach would be to restrict growth to a level that has already been accounted for in SW's 2019 WRMP (paragraph 4, page 1 of the Part C Strategy).
- 3.1.2 The Part C Strategy makes allowance for the demand measures already targeted by Southern Water as part of the current WRMP, which will effectively offset part, but not all of the growth proposed within emerging Local Plans. The remaining water demand, once tighter water usage restrictions and the current demand measures in the WRMP are taken into account, have been calculated within the Part C Strategy. This states that if the 110 l/p/d target was maintained, 6,345 new dwellings could be built in Sussex North up to 2030 without increasing abstraction at Pulborough (after SW's contribution and before offsetting), and this increases to 8,335 dwellings if the target of 85 l/p/d was adopted.
- 3.1.3 Despite not being granted full planning permission prior to NE's Position Statement on the 14 December 2021, the Proposed Development has been consistently planned for since it was granted outline planning permission in 2011 and has been accounted for in the population-based demand forecasts (i.e. it constitutes known, or existing demand) of SW's current WRMP. On this basis all 280 dwellings of Phase 3DEFG constitute "existing water demand" as water supply has been planned for under the assumption that they will be built; all 280 dwellings of Phase 3DEFG are included within the 6,345 dwellings that could be built in Sussex North up to 2030 without increasing abstraction at Pulborough, after SW's contribution and before offsetting.
- 3.1.4 As all 280 dwellings of Phase 3DEFG would be included within the 6,345 new dwellings that could be built in Sussex North up to 2030 without increasing abstraction at Pulborough according to the Part C Strategy, it is appropriate to apply a baseline per capita consumption (PCC) of 110 l/p/d. This baseline is equivalent to the target set out in the Part C Strategy in which 6,345 new dwellings can be built, and which takes into account the tighter water usage restrictions and the current demand reduction measures in the WRMP.
- 3.1.5 Provided if a PCC below 110 l/p/d is achieved through the development, there would be a reduced demand even compared to the calculations which provided the headroom of 6,345 dwellings and no increased abstraction would arise as a result of the development and consequently demonstrating 'water neutrality' is not required.

4 Proposal Demand

- 4.1.1 This section will calculate the anticipated water demand arising from the Proposed Development. As suggested by the 'Water neutrality and planning applications' guidance (Horsham District Council, 2023a), the Building Regulations Part G Calculator (HM Government, 2015) has been used to calculate anticipated PCC.
- 4.1.2 A 'Fittings approach' has been introduced to the Part G calculator which calculates total water consumption (litres/person/day) based on flow rates and water consumption of sanitary ware and appliances, multiplied by a government 'use factor', which is based on how often they are likely to be used (Jostec, 2021).
- 4.1.3 The 'Fittings approach' of the Part G calculator is based on flow rates and water consumption of sanitary ware and appliances. Table 4-1 outlines an indicative fittings schedule for the affordable dwellings included within Proposed Development and
- 4.1.4 Table 4-2 outlines a fittings schedule for the open market dwellings of the Proposed Development. Toilet flush and bath capacity to overflow volumes, washing machine and dishwasher water consumption rates, and flow rates for the shower, bathroom and kitchen taps were derived from their respective product specifications and entered into the Part G calculator for each dwelling type.

Table 4-1. Indicative water fittings schedule for affordable dwellings

Fitting	Measure (units)	Value	Product Details
WC (Dual Flush)	Flush Volume (litres)	Full Flush – 4.5 Part Flush – 3	Roca: Z34140N000
Kitchen taps	Flow Rate (litres/min)	5	Leisure: TAQPACE40CM/-AN Restricted to 5l/min with flow restrictor (included in tap)
Bathroom taps (regulated by flow restrictors)	Flow Rate (litres/min)	4	Bristan: CN SPH BASNW C Restricted to 4 l/min with flow restrictor: CN ECO TAP4
Shower	Flow Rate (litres/min)	6	Bristan; CN SPH BSM C / CN ZING SHWR C Bristan; 6 l/min flow restrictor: CN SHW06 ¹
Bath	Capacity to overflow (litres)	162	Roca: A2374N3000

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Fitting	Measure (units)	Value	Product Details
Washing Machine	Litres per kilogram of dry load	0	Not provided
Dishwasher	Litres per place setting	0	Not provided

Table 4-2: Indicative water fittings schedule for open market dwellings

Fitting	Measure (units)	Value	Product Details
WC (Dual Flush)	Flush Volume (litres)	Full Flush – 4.5 Part Flush – 3	Roca: A890121201 / A890121200 / A34199D00F
Kitchen and other taps	Flow Rate (litres/min)	5	Leisure: TAQPACE40CM/-AN Restricted to 5l/min with flow restrictor (included in tap)
Bathroom taps (regulated by flow regulators)	Flow Rate (litres/min)	4	Bristan: CN CDN BASNW C Bristan: 4 l/min flow restrictor: CN ECO TAP4
Shower	Flow Rate (litres/min)	6	Bristan: CN LOW LEV KIT / CN HI LEV KIT / CN FZSHWR C Bristan: 6 l/min flow restrictor; CN SHW062
Bath	Capacity to overflow (litres)	156	Roca: Z024715000
Washing Machine	Litres per kilogram of dry load	6	Indesit: BI WMIL 81485 UK
Dishwasher	Litres per place setting	0.85	Indesit: DIE 2B19 UK

4.1.5 Modelled anticipated PCC values, derived from the Part G Calculator, for both the affordable dwellings and open market dwellings are presented in Figure 4-1 and Figure 4-2 respectively. Based on the toilet flush and bath volumes, washing machine and dishwasher water consumption rates, and flow rates for the shower, bathroom and kitchen taps presented in Table 4-1, the affordable dwellings of the Proposed Development are anticipated to have a PCC of 72.75 l/p/d for internal uses (Figure 4-1). The Part G Calculator anticipates an additional 5 l/p/d for external water use

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(i.e. from an external hose pipe), resulting in a total PCC of 77.75 l/p/d for the 70 affordable dwellings of the Proposed Development.

Figure 4-1. Part G Calculator – Anticipated PCC for affordable dwellings

Installation Type	Unit of measure	Capacity / flowrate	Use factor	Fixed use (l/person/day)	Litres/person/day = [(1)*(2)]+(3) (4)
		(1)	(2)	(3)	(4)
WC (single flush)	Flush volume (litres)		4.42	0	
WC (dual flush)	Full flush volume (litres)	4.5	1.46	0	6.57
	Part flush volume (litres)	3	2.96	0	8.88
WCs (multiple fittings)	Average effective flushing volume (litres)		4.42	0	
Taps (exc kitchen taps)	Flow rate (l/min)	4.00	1.58	1.58	7.9
Bath (where shower also present)	Capacity to overflow (l)	162	0.11	0	17.82
Shower (where bath also present)	Flow rate (l/min)	6	4.37	0	26.22
Bath only	Capacity to overflow (l)		0.5	0	
Shower only	Flow rate (l/min)		5.6	0	
Kitchen sink taps	Flow rate (l/min)	5.00	0.44	10.36	12.56
Washing machine	l/kg dry load	0.00	2.1	0	0
Dishwasher	l/place setting	0.00	3.6	0	0
Waste disposal unit	l/use	0	3.08	0	0
Water softner	l/person/day	0	1	0	0
	(5)	Total calculated use (l/person/day) = Σ [column (4)]			79.95
	(6)	Contribution from greywater (l/person/day) from Table 4.6			0
	(7)	Contribution from rainwater (l/person/day) from Table 5.5			0
	(8)	Normalisation factor			0.91
	(9)	Total water consumption (CSH) = $[(5)-(6)-(7)]*(8)$ (l/person/day)			72.75
	(10)	External water use			5
	(11)	Total water consumption (Part G) = $(9)+(10)$ (l/person/day)			77.75

4.1.6 Similarly, based on the toilet flush and bath volumes, washing machine and dishwasher water consumption rates, and flow rates for the shower, bathroom and kitchen taps presented in Table 4-2, the open market dwellings of the Proposed Development are anticipated to have a PCC of 86.40 l/p/d for internal uses (Figure 4-2). With the additional 5 l/p/d for external water use (i.e. from an external hose pipe), the open market dwellings have a **total PCC of 91.40 l/p/d**.

Figure 4-2: Part G Calculator - Anticipated PCC for open market dwellings

Installation Type	Unit of measure	Capacity / flowrate	Use factor	Fixed use (l/person/day)	Litres/person/day = [(1)*(2)]+(3) (4)
		(1)	(2)	(3)	(4)
WC (single flush)	Flush volume (litres)		4.42	0	
WC (dual flush)	Full flush volume (litres)	4.5	1.46	0	6.57
	Part flush volume (litres)	3	2.96	0	8.88
WCs (multiple fittings)	Average effective flushing volume (litres)		4.42	0	
Taps (exc kitchen taps)	Flow rate (l/min)	4.00	1.58	1.58	7.9
Bath (where shower also present)	Capacity to overflow (l)	156	0.11	0	17.16
Shower (where bath also present)	Flow rate (l/min)	6	4.37	0	26.22
Bath only	Capacity to overflow (l)		0.5	0	
Shower only	Flow rate (l/min)		5.6	0	
Kitchen sink taps	Flow rate (l/min)	5.00	0.44	10.36	12.56
Washing machine	l/kg dry load	6.00	2.1	0	12.6
Dishwasher	l/place setting	0.85	3.6	0	3.06
Waste disposal unit	l/use	0	3.08	0	0
Water softener	l/person/day	0	1	0	0
(5)	Total calculated use (l/person/day) = Σ [column (4)]				94.95
(6)	Contribution from greywater (l/person/day) from Table 4.6				0
(7)	Contribution from rainwater (l/person/day) from Table 5.5				0
(8)	Normalisation factor				0.91
(9)	Total water consumption (CSH) = [(5)-(6)-(7)]*(8) (l/person/day)				86.40
(10)	External water use				5
(11)	Total water consumption (Part G) = (9)+(10) (l/person/day)				91.40

Water Neutral?

4.1.7 As mentioned in Section 2, HDC defines water neutrality as:

“Development that takes place which does not increase the rate of water abstraction for drinking water supplies above existing levels.”

4.1.8 Water neutrality can therefore be assessed by establishing the difference between existing (baseline) levels and anticipated levels arising from the Proposed Development.

4.1.9 For the purpose of calculating the ‘headroom’ of 6,345 dwellings, the Part C Strategy assumed a PCC of 110 l/p/d for development without extant planning permission prior to 14 September 2021 that was accounted for within SW’s WRMP19. Hence, 110 l/p/d was used as a baseline PCC for Kilnwood Vale Phase 3DEFG because it was without extant planning permission prior to 14 September 2021 but was accounted for within SW’s WRMP19.

4.1.10 The difference between the baseline PCC and calculated proposed PCC is shown Table 4-3. The results show that through the implementation of water efficient sanitary ware and appliances, there would be a decrease in average water consumption relative to the baseline in both the affordable and open market properties of the Proposed Development. This decrease would be of 32.25 l/p/d for

the 70 affordable dwellings and of 18.60 l/p/d for the open market dwellings. The Proposed Development consequently falls within the assumptions that lead to the 'headroom' of 6,345 new dwellings before 2030 without increasing abstraction at Hardham/Pulborough. Therefore, there is no water neutrality required.

Table 4-3. Determining Water Neutrality

Consumption Period	Affordable Dwelling PCC (l/p/d)	Open Market Dwelling PCC (l/p/d)
Baseline	110.00	110.00
Anticipated	77.75	91.40
Difference	-32.25	-18.60

5 Conclusion

- 5.1.1 This Water Neutrality Statement has been prepared in the light of the current delay to the Horsham District Local Plan following the release of Natural England's position statement regarding water abstraction within the SNWSZ. The consequence of this has been to delay development which may contribute to wider social, economic and environmental commitments made by HDC. This application, along with others, is being progressed anticipating the partnership work between HDC, Southern Water and Natural England being further progressed so a Water Neutrality Strategy for the area can be developed.
- 5.1.2 The Water Neutrality Strategy for the area will likely be in conjunction with the goals set out in Southern Water's next Water Resource Management Plan (WRMP24), which is currently available in draft form. The Draft WRMP24 seeks to reduce water stress in the supply zone by reducing leakage by 50%, and to achieve Per Capita Consumption (PCC) targets of 109 l/p/d by 2050, building on the substantial reductions in water supply achieved by Southern Water since privatisation, from over 725 Ml/day in 1989/1990 to 541 Ml/day in 2017/2018 (Environment Agency, 2020) (Southern Water, 2019b).
- 5.1.3 This Water Neutrality Study establishes that the water demand of the Proposed Development is equivalent to the PCC in which the 6,345 new dwellings that can be built, according to the Water Neutrality Study Part C, is based on, which takes into account the tighter water usage restrictions and the current demand measures in the WRMP. This existing PCC is 110 l/p/d.
- 5.1.4 The Part G Calculator shows the open market dwellings of the Proposed Development would have a PCC of 91.40 l/p/d, and the affordable homes would have a PCC of 77.75 l/p/d through the implementation of water efficient sanitary ware and appliances, which equates to a 17% and 29% reduction respectively.
- 5.1.5 This is well within what has been allowed for in the WRMP and there would, therefore, be no need for further water reduction measures and/or offsetting measures.
- 5.1.6 The evidence provided in this statement demonstrates that "water neutrality" is not required.

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