Homes England

The Housing and Regeneration Agency

West of Ifield, Crawley
Water Framework Directive Assessment

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WEST OF IFIELD
WATER FRAMEWORK DIRECTIVE ASSESSMENT

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WATER FRAMEWORK DIRECTIVE ASSESSMENT

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1. INTRODUCTION

1.1 Background

1.1.1 Ramboll UK Limited (Ramboll) has been appointed by Turner and Townsend Project Management Ltd (the 'Client') on behalf of Homes England (the 'Applicant') to undertake a Water Framework Directive (WFD) assessment of the proposed development (referred to as the 'Proposed Development' as outlined in Section 1.1 below) to be undertaken at the site located to the west of Ifield near Crawley in West Sussex (see Figure 1.1). Where applicable, groundwater elements have been provided by WSP, acting on behalf of the Applicant.

1.1.2 This WFD assessment has been prepared as there are three WFD designated water bodies present on-Site that have the potential to be affected by the Proposed Development. The assessment will support the hybrid planning application for the Proposed Development of land located at the Site.

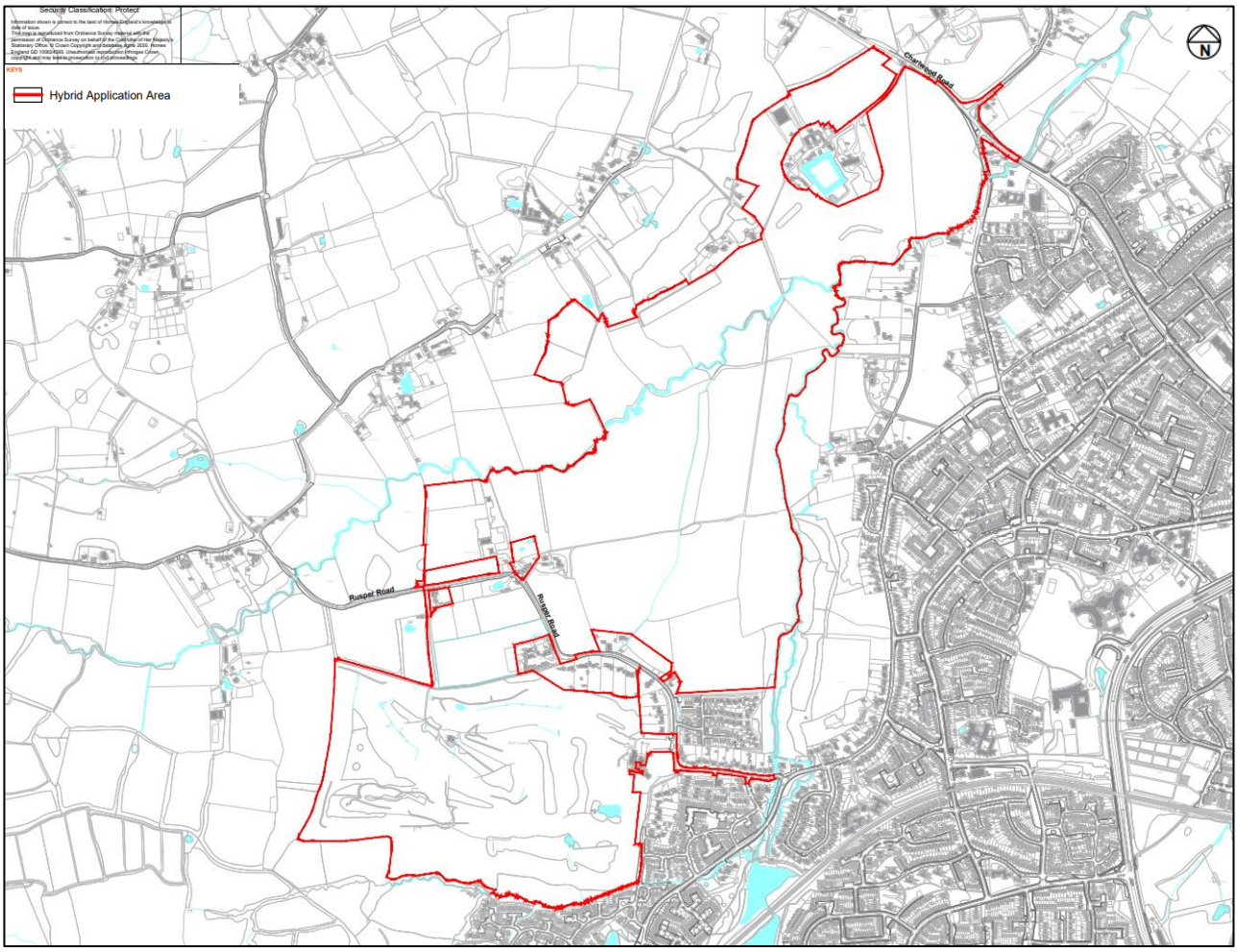

Figure 1.1: Site Location Plan (WOI-HPA-PLAN-LOC-01)

1.1.3 The southern part of the existing Site is occupied by Ifield Golf Course and Country Club (hereafter referred to as the 'golf course'). Within this area there are several ditches/ponds assumed for drainage of the existing golf course. While this area is designated for built development, as outlined in Section 1.1, these ditches/ponds are not considered relevant to the WFD assessment as they are man-made structures that are not considered to have significant environmental value in terms of WFD designated water bodies. The ditches/ponds are presented in Figure 1.2.

Figure 1.2: Land Use Parameter Plan (WOI-HPA-PLAN-PP03-01)

1.1.4 Information on the three WFD designated water bodies present on-Site is detailed in Section 2.2.

1.2 The Proposed Development

1.2.1 This report accompanies a hybrid planning application (part outline and part full planning application) for a phased, mixed-use development which is described as follows:

1.2.2 A full element covering enabling infrastructure including the Crawley Western Multi-Modal Corridor (Phase 1, including access from Charlwood Road and crossing points) and access infrastructure to enable servicing and delivery of secondary school site and future development, including access to Rusper Road, supported by associated infrastructure, utilities and works, alongside

1.2.3 An outline element (with all matters reserved) including up to 3,000 residential homes (Class C2 and C3), commercial, business and service (Class E), general industrial (Class B2), storage or distribution (Class B8), hotel (Class C1), community and education facilities (Use Classes F1 and F2), gypsy and traveller pitches (sui generis), public open space with sports pitches, recreation, play and ancillary facilities, landscaping, water abstraction boreholes and associated infrastructure, utilities and works, including pedestrian and cycle routes and enabling demolition.

1.2.4 This hybrid planning application is for a phased development intended to be capable of coming forward in distinct and separable phases and/or plots in a severable way.

1.2.5 Further details on the Proposed Development, the Description of Development, and the proposed land uses, are set out within the Development Specification and Parameter Plan Framework (WOI-HPA-DOC-DSPPF-01) and the Design and Access Statement (WOI-HPA-DOC-DAS-01).

1.2.6 The proposed land use of the Proposed Development is illustrated in Figure 1.3.

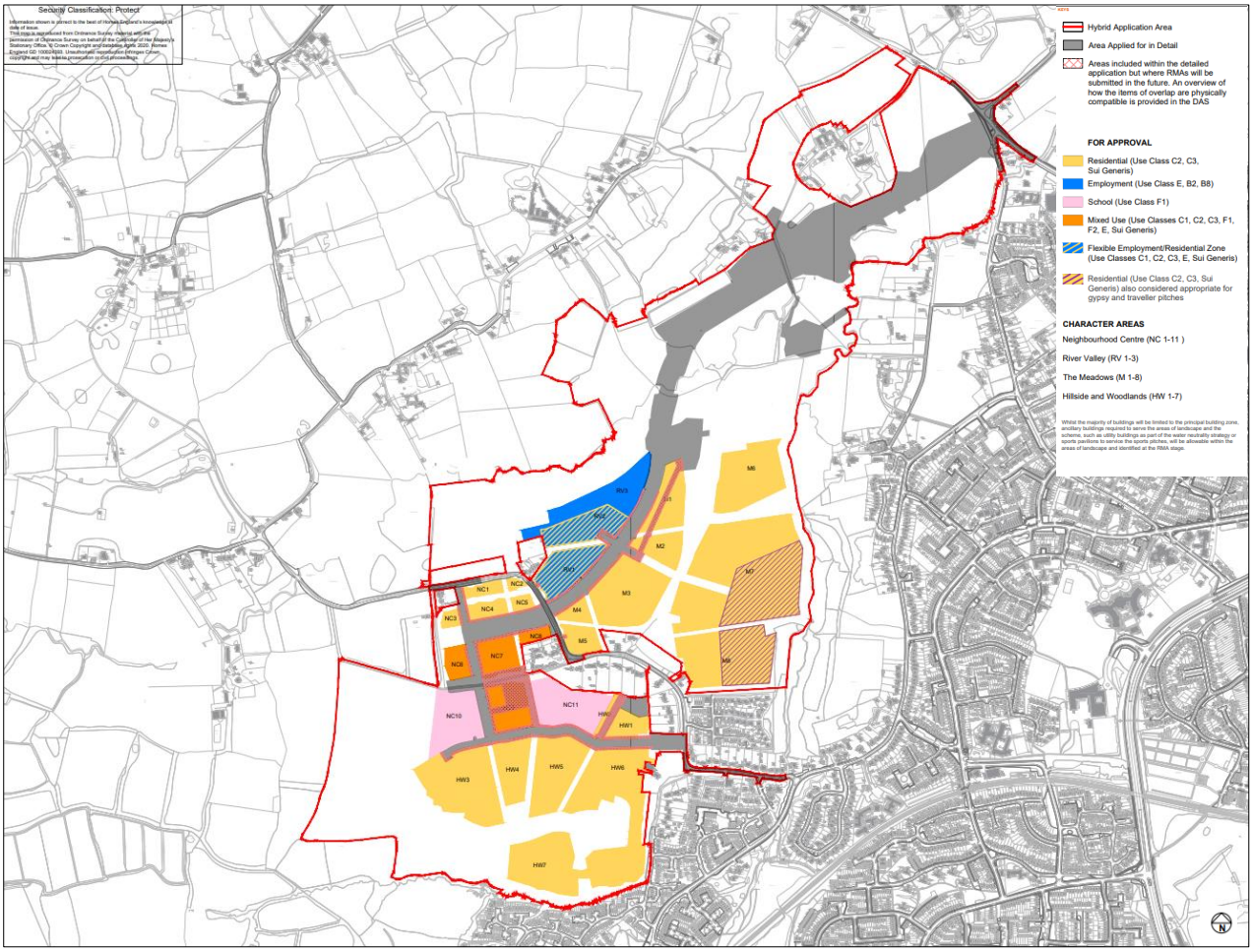

Figure 1.3: Land Use Parameter Plan (WOI-HPA-PLAN-PP03-01)

1.3 Construction Activities

1.3.1 Subject to approval and any conditions placed on the grant of permission for the hybrid planning application, construction is estimated to commence in 2027, with initial occupation of the school anticipated in 2028. Initial occupation of the homes is anticipated in 2029 and is expected to continue until 2041. The Outline Construction Environmental Management Plan (OCEMP) (ES Volume 2 Technical Appendix 5.1) sets out principles for how the construction stage would be managed to reduce impacts on local receptors.

1.3.2 The following elements of the construction are considered to have the potential to impact the water environment:

1. Dispersal of sediment resulting from excavations leading to potential sediment entry into local watercourses, in turn potentially impacting hydraulic conditions. Such excavations are likely to include standard earthworks practices as well as other preparation works such as vegetation clearance and topsoil strip;
2. Disposal of excavated sediment produced as a result of the excavations. If proactive measures are not taken regarding the disposal or reuse of excavated material, then it has the potential to lead to further sediment entry into local watercourses;
3. Surface runoff leaving the Site or entering surface water drains;
4. Potential hydrocarbon contamination from construction vehicles. If these vehicles are not maintained regularly then the potential for hydrocarbon contamination of the water environment would be increased;
5. General remodelling of ground levels following removal of existing structures and foundations;

6. Highway works including layering of road fill material, levelling, compaction, and the construction of the watercourse crossing;
7. Installation of foundations for construction of built development units and piles for construction of the highway;
8. Installation of groundwater abstraction wells and related construction and operational works;
9. Accidental contamination from the incorrect handling and storing of construction materials, potentially impacting the water environment through accidental spillage or release. This could also relate to the discharge of wastewater from the site; and
10. Location of potential above ground storage tanks (ASTs), if any are required. If not located within designated areas of hardstanding and with appropriate secondary containment, the potential to impact the water environment would be increased.

2. BASELINE ENVIRONMENT

2.1 The Site

2.1.1 The Site is located to the west of Ifield, a suburb of the town of Crawley. The Site is located within the Thames River Basin District (RBD) and the Proposed Development is subject to the Thames River Basin Management Plan (RBMP). The Site is approximately centred on National Grid Reference TQ 23679 36673 and occupies an area of approximately 171 hectares (see Figure 1.1). The Site falls within the administrative area of Horsham District Council (HDC).

2.1.2 The Site is located to the south of Charlwood Road, beyond which lies Gatwick Airport (approximately 1 km north). The Site lies to the north of the Arun Valley railway line and adjoins the existing neighbourhoods of Ifield and Langley Green in Crawley. To the east, the Site is bounded by trees and Ifield Village. The River Mole passes through the northern part of the Site.

2.1.3 The Site is predominantly occupied by a mixture of arable and pastoral fields and includes the golf course in its far southern portion.

2.2 Geology and Hydrogeology

2.2.1 As stated in the Ramboll Phase 1 Environmental Site Assessment[1], no significant groundwater body is recorded as being present directly underlying the Site. Furthermore, there are no current licensed groundwater abstractions within a 2 km radius of the Site, and the Site is not situated within an Environment Agency (EA) designated groundwater source protection zone (SPZ).

2.2.2 Table 2.1 presents site geology and hydrogeology.

Table 2.1: Geological Sequence

Stratum	Generic Description	Thickness (m)	Aquifer Classification
Alluvium	Clay, silt, sand, and gravel	Over 10m (where present)	Secondary A
River Terrace Deposits	Sand and gravel	Over 10m (where present)	Secondary A
Weald Clay Formation – Mudstones	Mudstone	Unknown	Unproductive Strata
Weald Clay Formation – Clays and Ironstones	Clays and Ironstones	Unknown	Unproductive Strata
Weald Clay Formation - Limestone	Limestone	Unknown	Secondary A

2.3 Surface Water Environment

2.3.1 The River Mole passes through the Site from south-west to north-east, with several tributaries either originating on-Site or passing through the Site. The Site is located within the 'Mole Upper Trib Operational Catchment', and within that the Site falls into three separate Water body catchments, that are defined a WFD water body, these being: Ifield Brook Water Body, the Baldhorns Brook Water Body, and the Mole upstream of Horley Water Body. An unnamed watercourse (not a WFD water body) is located in the centre of the Site between the River Mole and Ifield Brook flowing from south to north (another tributary of the River Mole).

Ifield Brook

2.3.2 Ifield Brook is a tributary of the River Mole and flows from south to north along the eastern boundary of the Site. It is classified as being of Moderate ecological status, failing to meet its objectives with respect to ecology due to '*Disproportionately expensive: Disproportionate burdens'*, with contributing factors including manganese concentrations, invertebrates, perfluorooctane sulphonate (PFOS), mercury and its compounds, and polybrominated diphenyl ethers. It is classified as a Heavily Modified Water Body (HMWB), having been altered from its natural state over a long period of time.

[1] Ramboll, Phase I Environmental Site Assessment (Ground Conditions), February 2025. Doc No.: 1620007949-RAM-ZZ-XX-RP-SS-00004-P01

Baldhorns Brook

2.3.3 Baldhorns Brook and the Mole upstream of Horley represent separate sections of the overall profile of the River Mole.

2.3.4 Baldhorns Brook represents the section of the River Mole located within the Baldhorns Brook Water Body Catchment (as shown in Figure 2.1). Baldhorns Brook is shown to be flowing from south-west to north-east through the north of the Site and is classified as being of Poor ecological status, failing to meet its objectives with respect to ecology due to '*Disproportionately expensive: Disproportionate burdens'*, with contributing factors including phosphate concentrations, macrophytes and phytobenthos, fish, invertebrates, dissolved oxygen, mercury and its compounds, and polybrominated diphenyl ethers.

Mole Upstream of Horley

2.3.5 The Mole upstream of Horley represents the section of the River Mole located within the Mole Upstream of Horley Water Body Catchment (as shown in Figure 2.1). The Mole Upstream of Horley is shown flowing from south-west to north-east across the north-east boundary of the Site and is classified as being of Moderate ecological status, failing to meet its objectives with respect to ecology due to '*Disproportionately expensive: Disproportionate burdens'*, with contributing factors including phosphate concentrations, dissolved oxygen, PFOS, mercury and its compounds, polybrominated diphenyl ethers, and fish. It is classified as a HMWB, having been altered from its natural state over a long period of time.

2.3.6 There are no recorded mitigation or management measures in place for any of these three water bodies.

2.3.7 This WFD assessment takes into account all three surface water body catchments within which the Site falls. These catchments are illustrated in Figure 2.1.

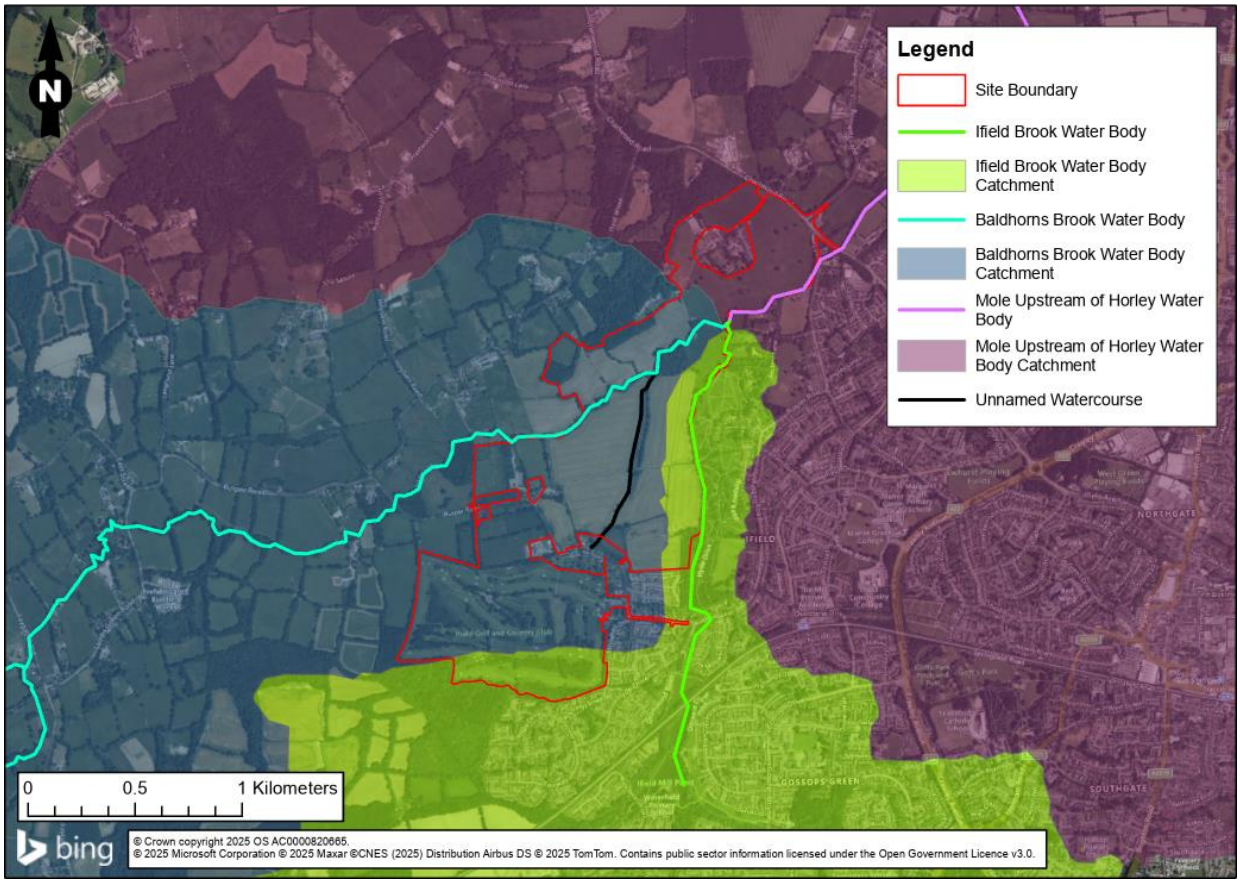

Figure 2.1: WFD Water Bodies

2.4 Groundwater Environment

2.4.1 According to records, no groundwater body is recorded to be present directly underlying the Site, however the closest recorded groundwater body is the Copthorne Tunbridge Well Sands, which the EA currently classifies as being of 'good' chemical quality and of 'good' quantitative status under the WFD classification scheme. The Site is not situated within an EA designated groundwater SPZ.

2.4.2 The Hydrogeological Risk Assessment[2] (WSP-WATER-REPORT-INT-0002) states that the Weald Clay Formation overlies the Tunbridge Wells Sand Formation (TWSM), the upper part of which is the Upper Tunbridge Wells Sand Member (UTWSM). The report was produced with the purpose of providing an initial assessment of the feasibility of, and potential impacts from, the development of a groundwater supply. The TWSM is a considerable depth below ground, and during exploratory drilling in late 2024/ early 2025 was demonstrated to occur at a depth of approximately between 103 m Below Ground Level (BGL) at its shallowest.[3]

[2] WSP Homes England, West of Ifield Development Groundwater Initial Feasibility and Hydrogeological Risk Assessment, April 2024, WSP-WATER-REPORT-INT-0002.

[3] The UTWSM was at the time of the report writing considered the likely target aquifer from which abstraction would take place. However, after exploratory drilling in late 2024/ early 2025 it was demonstrated that the Lower Tunbridge Wells Sand Member (LTWSM) was also present within 210 m depth beneath the Site. Both sandstone aquifers are considered future potential targets for abstraction and since they are both part of the TWSM strata within a similar hydrogeological regime the risk assessment document, with its conclusions is still considered valid for both sandstone members.

3. WATER FRAMEWORK DIRECTIVE

3.1 Background

3.1.1 The WFD (2000/60/EC) was published in December 2000 and transposed into English law in December 2003 through the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003, later being updated through The Water Environment (WFD) (England and Wales) (Amendment) Regulation 2015 and most recently The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The intention of the Directive is to provide a more holistic approach to protection of the water environment than had previously been in place, addressing a wide range of aspects of the water environment, including physico-chemical, chemical, hydromorphological and ecological.

3.1.2 For surface water bodies, the objectives of the WFD are to:

a) Prevent deterioration of the status of each body of surface water;

b) Protect, enhance and restore each body of surface water (other than an artificial or heavily modified water body) with the aim of achieving good ecological status and good surface water chemical status;

c) Protect and enhance each artificial or heavily modified water body with the aim of achieving good ecological potential and good surface water chemical status; and

d) Aim progressively to reduce pollution from priority substances and aim to cease or phase out emissions, discharges and losses of priority hazardous substances.

3.1.3 For groundwater bodies, the objectives of the WFD are to:

a) Prevent deterioration of the status of each body of groundwater;

b) Prevent or limit the input of pollutants into groundwater;

c) Protect, enhance and restore each body of groundwater, and ensure a balance between abstraction and recharge of groundwater, with the aim of achieving good groundwater chemical status and good groundwater quantitative status; and

d) Reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity in order to progressively reduce pollution of groundwater.

3.1.4 The Directive requires that the EA define River Basin Districts and for each of these develop a RBMP. As part of this process all inland (above or below ground) and coastal waters have been allocated status categories in order to help inform where water bodies are at risk and/or protective/management measures need to be put in place.

3.2 Assessment Process

3.2.1 In December 2016 the EA produced updated guidance[4] as to how to assess the impact of activities in estuarine (transitional) and coastal waters with respect to the requirements of the WFD. The aim of such WFD assessments is to assist the regulator in assessing:

i. The impact an activity may have on the immediate water body and any linked water bodies; and

ii. Whether the activity complies with the relevant RBMP.

3.2.2 The EA guidance adopts a three-stage process as follows:

i. Screening – This excludes any activities that don't need to go through the scoping or impact assessment stages;

[4] GOV.UK, Water Framework Directive assessment: estuarine and coastal waters [online]. Available at: https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters. Accessed June 2024.

ii. Scoping – Identifies the receptors that are potentially at risk from your activity and need impact assessment; and

iii. Impact Assessment – Considers the potential impacts of your activity, identifies ways to avoid or minimise impacts, and shows if your activity may cause deterioration or jeopardise the water body achieving good status.

3.2.3 The assessment presented in this report, follows the above protocol and utilises the resources and templates provided by the EA for this purpose, while suitably adapting the guidance for the terrestrial environment.

4. ASSESSMENT

4.1 Screening

4.1.1 There is no WFD designated groundwater body present directly underlying the Site, however there are three surface water bodies within the Site: Ifield Brook, Baldhorns Brook, and the Mole upstream of Horley. All three of these surface water bodies are classified as main rivers and have flood plains associated with them within the boundary of the Site. Therefore, these on-Site WFD designated water bodies have the potential to be affected by the Proposed Development and thus a WFD assessment is required. The EA's three-stage process has been adopted.

4.2 Scoping

4.2.1 The EA protocol provides a scoping template to complete to identify the potential risks to receptors associated with a project or activities and thus inform the scope of any required detailed impact assessment. The completed scoping template is presented below in Table 4.1.

4.2.2 Within each topic presented below, the conclusions as to whether further impact assessment is required or not, is indicated in bold text, with the reasoning for that decision in the 'risk issues' column to the right.

Table 4.1: Water Framework Directive Assessment Scoping – Specific Risk Information

Assess Further if Activity:	Yes	No	Risk Issue(s)
HYDROMORPHOLOGY			
Could impact on the hydromorphology (for example morphology or tidal patterns) of a water body at high status	Requires impact assessment	**Impact assessment not required**	No. The water bodies on-Site are of 'moderate' (Ifield Brook and Mole upstream of Horley) and 'poor' (Baldhorns Brook) ecological status and 'fail' chemical status. No works are proposed to take place within the water bodies.
Could significantly impact the hydromorphology of any water body	Requires impact assessment	**Impact assessment not required**	No. The morphology of the water bodies on-Site is unlikely to be significantly impacted by the Proposed Development. The crossing of the River Mole will be clear span with no culverts or piers and would have minimum vertical clearance of 2.8m to ground level. The Proposed Development is therefore unlikely to result in significant changes to the hydromorphology of the river. No areas of built development are proposed within the body of either the River Mole, Ifield Brook, or the unnamed watercourse flowing from south to north located between the River Mole and Ifield Brook.
Is in a water body that is heavily modified for the same use as your activity	Requires impact assessment	**Impact assessment not required**	No. Ifield Brook and Mole Upstream of Horley are classified as HMWB having been altered from their natural state over a long period of time, assumed for purposes related to land drainage, navigation and flood control and not for the same purposes as the Proposed Development, which is to construct the proposed Crawley Western Multi-Modal Corridor (CWMMC) and associated watercourse crossing. The CWMMC will be clear span with no culverts or piers and will be located comfortably above water level. It will not affect the state of the water bodies.
BIOLOGY – HABITATS			
0.5 km^2 or larger	**Yes to one or more – requires impact assessment**	No to all – impact assessment not required	Yes. The Site boundary encompasses an area of approximately 171 ha.
1 % or more of the water body's area			Yes. The works consist of an area >1 % of the collective area of the three on-Site water bodies.
Within 500 m of any higher sensitivity habitat			Yes. While there are no designated higher sensitivity WFD habitats (e.g., Saltmarsh, Chalk Reef) present on-Site due to its location inland, for the purposes of this assessment the three WFD water bodies have been considered as higher sensitivity habitats[5]. The Proposed Development is within 500 m of all three of these higher sensitivity habitats present on-Site.
1 % or more of any lower sensitivity habitat			No. There are no designated lower sensitivity WFD habitats (e.g., subtidal soft sediment, rockyshore) present on-Site due to its location inland. The ditches/ponds found in the golf course, as outlined in Section 1.0, are not considered to have significant environmental value in the terms of this WFD assessment.

[5] Please note that sensitivity is not to be confused with water body status. Status refers to the overall ecological and/or chemical quality of the water body in question. Sensitivity is a reference to the vulnerability of the said topic (e.g., Hydromorphology, Biology – Habitats) to the Proposed Development.

Assess Further if Activity:	**Yes**	**No**	**Risk Issue(s)**
BIOLOGY - FISH			
Could impact on normal fish behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Requires impact assessment	**Impact assessment not required**	No construction works are proposed to occur within the water bodies, and the footprint of the CWMMC does not extend into the water, therefore there will be no direct impacts on the fish population at the Site. No chemical or physical changes in the water bodies are anticipated as a result of the Proposed Development.
Could cause entrainment or impingement of fish	Requires impact assessment	**Impact assessment not required**	
WATER QUALITY			
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns ***continuously for longer than a spring neap tidal cycle*** (about 14 days)	Requires impact assessment	**Impact assessment not required**	Not in a tidally influenced water body and no construction works are proposed to take place within the water bodies, therefore despite the construction stage lasting longer than 14 days, no direct interaction with the water bodies (and specifically tidally influenced water bodies) is anticipated as a result of the Proposed Development.
Is in a water body with a history of harmful algae	Requires impact assessment	**Impact assessment not required**	This information is not available (not monitored by the EA). Given the nature of the Proposed Development this is not considered to be an issue.
Assess Further if Activity Uses or Releases Chemicals (e.g., Through	**Yes**	**No**	**Water Quality Risk Issue(s)**

Assess Further if Activity:	**Yes**	**No**	**Risk Issue(s)**
Sediment Disturbance or Building Works)			
The chemicals are on the WFD Classification Item list	**Requires impact assessment**	Impact assessment not required	It is possible for the chemicals listed on WFD Catchment Data Explorer, in each catchment, to be present at the Site due to the historical agricultural land use and the existence of a pump house from 1920 to 1992. Given the higher sensitivity of the WFD water bodies and their proximity to the agricultural fields and historic pump house location, the potential exists for shallow contamination (if present) to adversely affect surface waters.
It disturbs sediment with contaminants above Cefas Action Level 1	**Requires impact assessment**	Impact assessment not required	However, the lack of any shallow groundwater at the Site and improbability of lateral migration through the impermeable strata minimises the likelihood of migration of contaminants into the watercourses, and limits migration of shallow contamination. Measures in place to minimise this mobilisation will be discussed in the Impact Assessment section below. Proposed shallow workings/excavations and the construction, operation or decommissioning of installed, deep abstraction boreholes at the Site have the potential to affect surface water and groundwater resources or quality.
PROTECTED AREAS			
Assess Further if Activity is:	**Yes**	**No**	**Protected Areas Risk Issue(s)**
Within 2 km of any WFD Protected Area	Requires impact assessment	**Impact assessment not required**	There are no WFD Protected Areas within 2 km of the Site.
INVASIVE NON-NATIVE SPECIES (INNS)			
Assess Further if Activity Could:	**Yes**	**No**	**INNS Risk Issue(s)**
Introduce or spread INNS	**Requires impact assessment**	Impact assessment not required	Cotoneaster, Invasive Rhododendron, Cherry Laurel, and New Zealand Pygmyweed are among INNS identified at the Site[6]. Any INNS present at the Site would be managed appropriately as part of the works. This will be discussed in the Impact Assessment section below.

[6] Volume 1: Main Environmental Statement, Chapter 8: Biodiversity, 16200007949, 2025.

4.2.3 A summary of the potential risks to be assessed, derived from the exercise carried out in Table 4.1, has been presented in Table 4.2. Where no risk to potential receptors is identified at scoping stage, an impact assessment does not need to be completed. Where potential risks have been identified, these have been taken forward for detailed impact assessment in subsequent sections.

Table 4.2: Potential Risks to be Assessed

Receptor	Note the Risk Issue(s) for Impact Assessment
Biology - habitats	A number of sensitive habitats are located inside the Site boundary, which could be affected by the Proposed Development.
Water quality	Due to the historic land uses of the Site and the proximity to the watercourses, there exists potential for shallow contamination (if present) to migrate to the surface water via sediment disturbance or surface water runoff, although it is noted that the lack of any shallow groundwater and the improbability of lateral migration through the impermeable strata minimises the likelihood of contaminant migration into the watercourses and limits migration of shallow contamination. There also exists the potential for accidental hydrocarbon contamination from on-Site vehicles during construction to migrate to the surface water. There further exists the potential for the proposed shallow workings/excavations and the construction, operation or decommissioning of installed, deep abstraction boreholes at the Proposed Development Site to affect surface water and groundwater resources or quality.
Invasive non-native species	Cotoneaster, Invasive Rhododendron, Cherry Laurel, and New Zealand Pygmyweed are among INNS identified at the Site.

5. IMPACT ASSESSMENT

5.1 Mitigation Measures

5.1.1 The impact assessment below is written in the context of the following mitigation measures/design interventions being included within the design, construction, and operation of the Proposed Development:

i. Surface water collected from vehicular and delivery areas would be treated with a petrol interceptor as appropriate and in accordance with best practice to provide treatment for contaminants to a quality suitable for discharging to a surface watercourse;

ii. Completion of construction works as outlined within the Outline Construction Environmental Management Plan (OCEMP, ES Appendix 5.1); measures would include, but are not limited to, the use of the EA's guidance on works in, near or over watercourses[7] and the need to carry appropriate spill kits should accidental spillage occur, to minimise the damage caused by such an event;

iii. Inclusion of Sustainable Drainage Systems (SuDS) attenuation measures to limit flow to existing rates for existing areas of hardstanding/road and to low return period rates for newly constructed hardstanding/highway (including allowances for the predicted effects of climate change over the lifetime of the Proposed Development in line with EA guidance). This would have the additional benefit of contributing to pollution control. Techniques such as detention ponds, swales, filter trenches, and below ground tanks have been considered viable for the Proposed Development and have been integrated within the proposals; and

iv. Good practice techniques and methodologies as well as permitting would be undertaken during the implementation of shallow workings, excavations and drilling works as well as the decommissioning of any drilled boreholes. The drilling and testing of any boreholes would be subject to conditions of permitting from the EA. If abstraction boreholes are brought into operation, they would be subject to licencing from the EA and appropriate monitoring. In addition, a 50m (SPZ 1) would be created around any proposed abstraction boreholes to prevent any discharges or potentially contaminative land uses within its vicinity.

5.1.2 The surface water drainage strategy to be implemented as part of the proposed scheme is detailed in the Drainage Strategy Report (WOI-HPA-DOC-SWDS-01).

5.2 Impact Assessment

5.2.1 As discussed in Section 4 and Table 4.2, the following potential risks to receptors have been identified:

- Biology - Habitats;
- Water Quality; and
- Invasive Non-Native Species.

5.2.2 These risks are discussed in the following sections.

5.3 Water Quality

5.3.1 The following potentially contaminative activities have been identified as having taken place on-Site:

- The historic and ongoing use of the majority of the Site as agricultural land is potentially likely to have involved the long-term use of chemical fertilisers, pesticides and herbicides, which may remain within the shallow soils in limited quantities.
- The historic and ongoing use of the southern area of the Site as a golf course is likely to have involved groundskeeping using machinery. Chemicals relating to this are likely to have been

[7] GOV.UK, Works in, near or over watercourses, PPG5: prevent pollution (note guidance no longer supported by the EA, but continues to be utilised as good practice within the UK) [online] Available at: https://www.gov.uk/government/publications/works-in-near-or-over-watercourses-ppg5-prevent-pollution.

stored and used on-Site, presenting a potential source of contamination relating to fuels, lubricating oils, pesticides, herbicides, and fertilisers.

- Dumfries Pump House was present in the central eastern area of the Site between 1920 and 1992. It is assumed to have been the location of pumping machinery and as such presents a potential source of contamination relating to the use of fuel and lubricating oils.

5.3.2 Due to the historic land uses of the Site, there exists the potential for shallow contamination to migrate to the watercourses as a result of sediment disturbance during the construction of the Proposed Development, and migration through the Secondary A aquifer. Additionally, accidental spillages from construction vehicles and plant are possible, which, if they were to occur close to the water bodies, could release contaminants such as fuels, oils, coolants, and lubricants. However, as no works are proposed to occur within the water bodies; the Site is predominantly underlain by the impermeable Weald Clay Formation; and there is no significant groundwater body present directly underlying the Site, shallow aquifer migration and surface water runoff are considered the only pathways to the watercourses.

5.3.3 Sampling and testing for targeted elements of contamination in close proximity of both the identified on-Site sources of contamination, and the surface watercourses, has been recommended in the Phase 1 Environmental Site Assessment (Ground Conditions)[8]. This will determine the presence of any contamination on-Site, along with sampling of on-Site surface watercourses up and downstream of the Site. If possible, this sampling would take place during construction works. This would determine the Site-specific mitigation measures required during the construction phase in order to avoid any migration of contaminants when earthworks are being implemented, if contamination is present, as outlined in the OCEMP (ES Appendix 5.1).

5.3.4 As per Chapter 5 of the main Environmental Statement (ES)[9], various mitigation measures to avoid any contamination to the watercourses are outlined in the OCEMP (ES Appendix 5.1). The suggested measures involve storing all liquids and solids of potentially hazardous nature (e.g., fuels, oils and solvents) on surfaced areas with bunding, and within secured areas; not using any underground storage tanks, storing, handling and managing construction materials carefully to avoid spillage; and maintaining construction materials to reduce the risk of hydrocarbon contamination.

5.3.5 Additionally, all works would be undertaken in accordance with the following legislation:

- Water Resources Act 1991[10];
- Water Act 2003[11];
- Control of Pollution (Oil Storage) Regulations 2001[12]; and
- EA's Pollution Prevention Guidelines PPG1[13], PPG2[14], PPG3[15] and PPG6[16].

[8] Ramboll, Phase I Environmental Site Assessment (Ground Conditions), February 2025. Doc No.: 1620007949-RAM-ZZ-XX-RP-SS-00004-P01

[9] Ramboll, 2025. Volume 1: Main Environmental Statement, West of Ifield, 1620007949_1_WoI ES.

[10] Secretary of State, 1991. Water Resources Act 1991. HMSO. Available at: https://www.legislation.gov.uk/ukpga/1991/57/contents .

[11] Secretary of State, 2003. Water Act 2003. HMSO. Available at: https://www.legislation.gov.uk/ukpga/2003/37/contents .

[12] Secretary of State, 2001. Control of Pollution (Oil Storage) Regulations 2001. HMSO. Available at: https://www.legislation.gov.uk/uksi/2001/2954/contents .

[13] GOV.UK, Basic good environmental practices, PPG1: prevent pollution (note guidance no longer supported by the EA, but continues to be utilised as good practice within the UK) [online] Available at: https://www.gov.uk/government/publications/basic-good-environmental-practices-ppg1-prevent-pollution .

[14] GOV.UK, Choosing and using oil storage tanks, PPG2: prevent pollution (note guidance no longer supported by the EA, but continues to be utilised as good practice within the UK) [online] Available at: https://www.gov.uk/government/publications/choosing-and-using-oil-storage-tanks-ppg2-prevent-pollution .

[15] GOV.UK, Choosing and using oil separators, PPG3: prevent pollution (note guidance no longer supported by the EA, but continues to be utilised as good practice within the UK) [online] Available at: https://www.gov.uk/government/publications/choosing-and-using-oil-separators-ppg3-prevent-pollution .

[16] GOV.UK, Construction and demolition-Sites, PPG6: prevent pollution (note guidance no longer supported by the EA, but continues to be utilised as good practice within the UK) [online] Available at: https://www.gov.uk/government/publications/construction-and-demolition-sites-ppg6-prevent-pollution .

5.3.6 Therefore, although the potential exists for the water quality of the WFD designated water bodies to be impacted, the presence of contaminants on-Site would be confirmed during subsequent Site assessments. The mitigation requirements are well established should contaminants be discovered on-Site. There is no shallow groundwater for migration and the underlying geology is relatively impermeable which has removed a further pathway. Various mitigation measures would also be in place to avoid any migration of contamination, either created or mobilised to the watercourses through construction activities. With these mitigation measures in place, the potential risks to water quality are considered to be managed.

5.3.7 The Hydrogeological Risk Assessment[2] did not identify any significant residual risks to surface water and groundwater resources or quality that may result from the Proposed Development construction works or the construction, operation or decommissioning of installed abstraction boreholes at the Site. It is further stated that any monitoring requirements appropriate for the construction and operation phases will be identified in consultation with the EA and during the determination of any licence for the proposed groundwater abstraction.

5.4 Biology - Habitats

5.4.1 The potential pollution and runoff effects of construction would be mitigated through the implementation of the OCEMP (ES Appendix 5.1). The OCEMP would deliver avoidance and control measures such as the use of bunds to catch and divert runoff, and the use of drip trays to prevent any oil and fuel spillages spreading. Windblown dust would be minimised by using wheel washing and damping down measures, while net fencing would catch windblown rubbish. Sediment control measures such as hay bales will additionally be implemented as part of the construction works as required. Watercourse banks would be protected from damage by construction plant. Buffers for built development comprising roads and buildings would be a minimum of 25 m in width around sensitive habitats such as on-Site water bodies and would be designed to protect habitats, with the exception of the bridge over the River Mole. The Site's existing wetland habitats, including Ifield Brook and the River Mole, would be maintained. Further mitigation and enhancement measures, as well as detailed findings with respect to aquatic and other habitats, are detailed in Chapter 8 (Biodiversity) of the ES.

5.5 Invasive Non-Native Species

5.5.1 Due to the prevalence of a number of invasive non-native species, Cotoneaster, Invasive Rhododendron, Cherry Laurel, and New Zealand Pygmyweed, within the Site, an Invasive Non-Native Species Strategy will be produced that would prescribe the approach to eradicate these species prior to site clearance commencing. The strategy has been referenced in the OCEMP (ES Appendix 5.1) for the Site and includes:

- Detailed mapping and marking out of the species prior to construction (to be carried out during the growing season to ensure complete and accurate mapping whilst the plants are readily identifiable);
- Appropriate control measures for the removal and disposal, or in-situ treatment. Control measures would be specific to the species, location and future use of the area where each stand is located;
- Biosecurity measures would be included in all Site inductions and, where appropriate, vehicle and boot washing facilities would be provided in the construction compound; and
- Monitoring for re-growth (to continue for at least five years post-works), with appropriate remedial measures (such as spot-treatment with appropriate herbicide) prescribed.

5.6 Mitigation Measures Assessment

5.6.1 In their overall advice[17], the EA have not identified any details of mitigation measures in place to protect Ifield Brook, Baldhorns Brook, and the Mole upstream of Horley water bodies. In addition, the WFD Mitigation Measures Table[18] does not identify any mitigation measures for the water bodies at the Site. A mitigation measures assessment is therefore not required.

5.7 Deterioration and Risk to Good Status Assessment

5.7.1 As of 2022, Ifield Brook Water Body had a 'Moderate' ecological status; Baldhorns Brook Water Body had a 'Poor' ecological status, and the Mole upstream of Horley Water Body had a 'Moderate' ecological status. All three water bodies had a 'fail' chemical classification.

5.7.2 With the implementation of the mitigation measures detailed above, and construction management measures outlined within the OCEMP (ES Appendix 5.1), any effects on the water bodies are considered to be avoided. As such no deterioration in water body classification would occur, and the Proposed Development would:

i. Not result in reduction of WFD classification in any of the water bodies;

ii. Not put at risk the good status/potential of any water body; and

iii. Not inhibit any water body from progressing towards good status/potential.

[17] Department for Environment Food & Rural Affairs, Environment Agency, Catchment Data Explorer [online]. Available at: https://environment.data.gov.uk/catchment-planning/v/c3-plan/England/measures. Accessed February 2025.

[18] GOV.UK, Water Framework Directive assessment: estuarine and coastal waters [online]. Available at: https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters. Accessed June 2024.

6. CONCLUSIONS

6.0.1 The Site falls into three separate WFD Water Body catchments. These are Ifield Brook, Baldhorns Brook, and the Mole upstream of Horley. The WFD assessment has been undertaken in line with WFD requirements as detailed in Section 3.

6.0.2 It is concluded from the above assessment that, with implementation of the noted mitigation measures plus environmental management during construction, the Proposed Development would not have any adverse impact on the WFD water bodies within and adjacent to the Site. It is thus in compliance with the requirements of the WFD and supports the Thames RBMP, subject to the implementation of the noted mitigation measures which are summarised below:

- Surface water collected from vehicular and delivery areas would be treated with a petrol interceptor as appropriate and in accordance with best practice to provide treatment for contaminants to a quality suitable for discharging to a surface watercourse;
- Completion of construction works as outlined within the Outline Construction Environmental Management Plan (OCEMP, ES Appendix 5.1); measures would include, but are not limited to, the use of the EA's guidance on works in, near or over watercourses[7] and the need to carry appropriate spill kits should accidental spillage occur, to minimise the damage caused by such an event;
- Inclusion of Sustainable Drainage Systems (SuDS) attenuation measures to limit flow to existing rates for existing areas of hardstanding/road and to low return period rates for newly constructed hardstanding/highway (including allowances for the predicted effects of climate change over the lifetime of the Proposed Development in line with EA guidance); and
- Good practice techniques and methodologies as well as permitting would be undertaken during the implementation of shallow workings, excavations and drilling works as well as the decommissioning of any drilled boreholes that are no longer required. The drilling and testing of any boreholes would be subject to conditions of permitting from the EA.

6.0.3 Further mitigation measures and proposed environmental management measures for the construction are detailed in Section 5.

6.0.4 The hybrid planning application is for a phased development intended to be capable of coming forward in distinct and separable phases and/or plots in a severable way. In terms of severability, the identified effects on identified WFD Water Body catchments would increase incrementally as different phases are built, although in total they would not exceed the effects identified in this assessment. Providing the mitigation proposed in this report was implemented (as secured by appropriate planning condition(s) attached to the outline permission or as detailed within future reserved matters applications), or replicated in an alternative application, then development of a given phase would not alter the identified effects on identified WFD Water Body catchments. Mitigation for a given phase is not contingent on implementation or mitigation of other phases of the Proposed Development.