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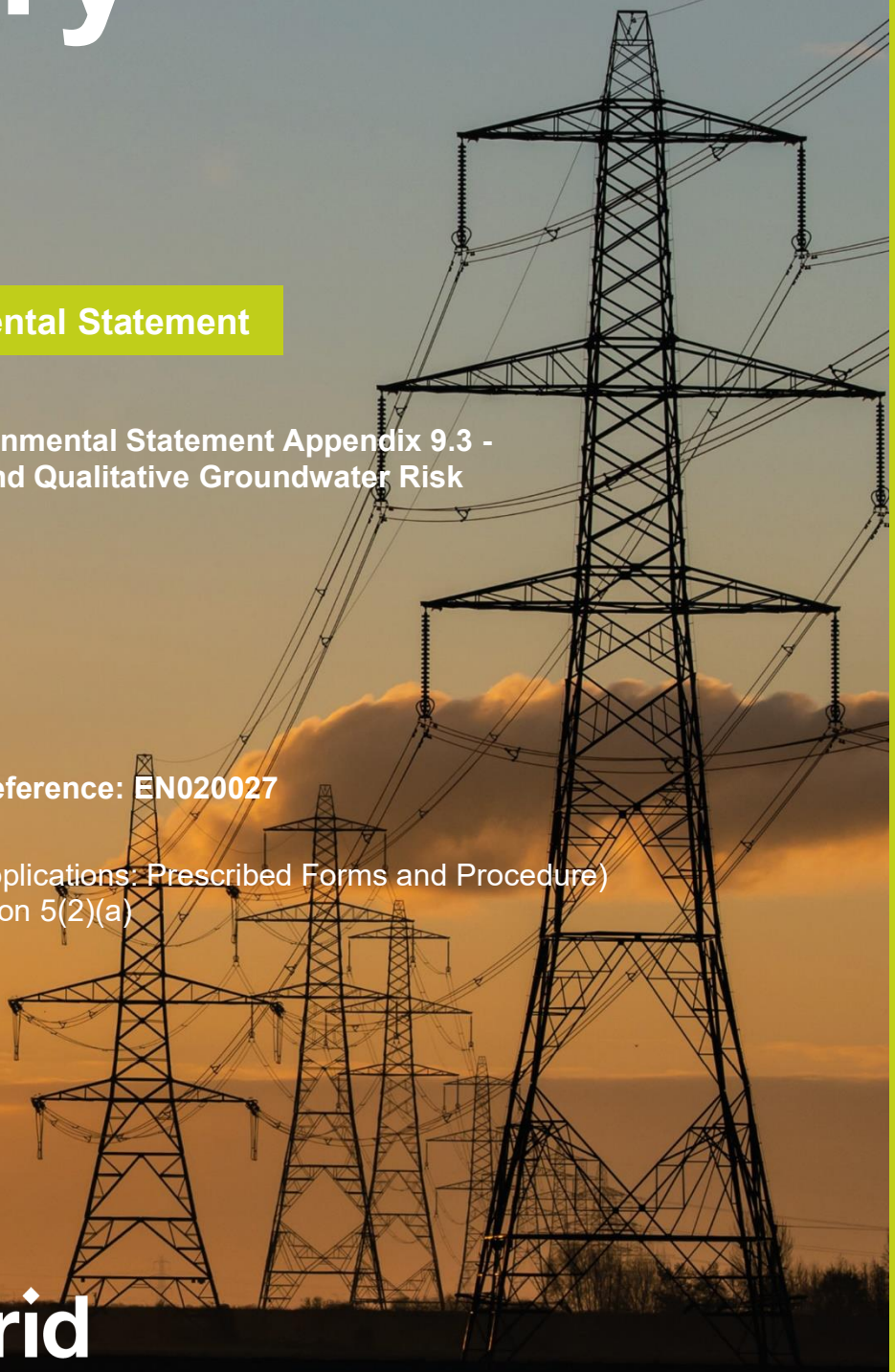

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Contents

9. Groundwater Baseline and Qualitative Groundwater Risk Assessment

9.1 Introduction

Overview

9.1.1 This qualitative groundwater risk assessment appendix has been produced to inform Chapter 9: Contaminated Land, Geology and Hydrogeology (document reference 6.9) of the Environment Statement (ES) (Volume 6 of the Development Consent Order (DCO) application) for Norwich to Tilbury (the 'Project'). This appendix has been prepared to provide baseline information regarding the groundwater (hydrogeology) and a qualitative groundwater risk assessment.

9.1.2 As described in Chapter 9: Contaminated Land, Geology and Hydrogeology (document reference 6.9), the Study Area for hydrogeology comprises the physical extents of the Order Limits plus a buffer of 500 m.

Structure of this Appendix

9.1.3 The structure of this appendix is as follows:

- Section 9.2: Baseline Information – which provides information on and identification of potential receptors
- Section 9.3: Methodology – which presents information on the methodology followed in this appendix and the accompanying classification tables
- Section 9.4: Qualitative Groundwater risk assessment – which presents an assessment of the groundwater risks of each element of the Proposed Project using a combination of receptor identification and associated sensitivity and magnitude of the potential risk
- Section 9.5: Conclusions – which presents a summary of the findings of this appendix.

9.1.4 The Project has also been sub-divided into eight geographical sections for reader accessibility, based largely on Local Planning Authority boundaries and comprise:

- Section A - South Norfolk Council
- Section B - Mid Suffolk District Council
- Section C - Babergh District Council, Colchester City Council and Tendring District Council
- Section D - Colchester City Council
- Section E - Braintree District Council
- Section F - Chelmsford City Council and Brentwood District Council

- Section G - Basildon Borough Council and Brentwood Borough Council (and part of Chelmsford City Council)
- Section H - Thurrock Council

9.1.5 Receptors reported within this document are reported with reference to the Project Section in which they are located.

Sources of Information

9.1.6 This baseline appendix is informed by a desk based study of available information, including maps, geological data and other publicly available data. The following is a list of the key sources of information used to inform the desk study:

- British Geological Survey (BGS) 1:50,000 scale geological mapping (British Geological Survey, 2025)
- BGS Geoindex Viewer (British Geological Survey, 2025), including the location of water wells
- BGS Hydrogeological Maps
- Defra mapped information, via the MAGIC website (Defra, 2025) for Source Protection Zones (SPZ), aquifer designations, hydrological features, groundwater vulnerability, drinking water safeguard zones and statutory designated sites
- Environment Agency Hydrology Data Explorer (Environment Agency, 2025)
- Groundwater abstraction data from the Environment Agency
- Private water supply information from South Norfolk, Babergh and Mid Suffolk District Councils, Tendring District Council, Colchester City Council, Braintree District Council, Chelmsford City Council, Brentwood Borough Council and Basildon Borough Council and Thurrock Council
- Hydrogeological Risk Assessment for the proposed River Stour crossing, undertaken by Mott MacDonald, included as Appendix 9.4 Hydrogeological Risk Assessment (document reference 6.9.A4).

9.2 Baseline Information (Identification of Receptors)

Geology

9.2.1 The geology in the Study Area is shown on Figure 9.1: Superficial Geology (document reference 6.9.F1) and Figure 9.2: Bedrock Geology (document reference 6.9.F2) and summarised below. Further information on the geology is presented in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1).

Published Geology – Superficial Deposits

9.2.2 The superficial geology beneath the Study Area within Sections A, B, D, E and F generally comprises the Lowestoft Formation (Diamicton). Where river valleys cross the Order Limits the superficial deposits in these areas comprise the Lowestoft Formation (Sand and Gravel), Alluvium, River Terrace Deposits, Head Deposits and Kesgrave Catchment Subgroup.

9.2.3 The superficial geology within Section C of the Study Area comprises the river valley deposits described above and large areas of Cover Sands.

9.2.4 Superficial deposits within Section G and Section H of the Study Area are indicated to be absent within parts of these sections and where present are dominated by the river valley deposits of Alluvium, River Terrace Deposits and Head Deposits.

Published Geology – Bedrock

9.2.5 In Section A the bedrock comprises the White Chalk Subgroup. In Section B the bedrock comprises the White Chalk Subgroup, Newhaven Chalk Formation and Crag Group. In Section C the bedrock comprises the Thames Group, Thanet Formation and Lambeth Group (Undifferentiated), and Red Crag. In Sections D, E, F and G the bedrock comprises the London Clay Formation, with the Claygate Member and Bagshot Formation also outcropping within Section F and Section G. In Section H the bedrock comprises the London Clay Formation, Harwich Formation, Lambeth Group, Thanet Formation, and the White Chalk Subgroup.

Aquifer Designation

9.2.6 A review of the aquifer designations provided on Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) online map viewer (Defra, 2025) indicates that the superficial deposits anticipated to be present within the Study Area of the Project are classified as follows:

- **Secondary A Aquifers (medium sensitivity)**: Alluvium, Sheringham Cliffs Formation, Happisburgh Glacigenic Formation, Lowestoft Formation – Sand and Gravel, River Terrace Deposits, Ingham Sand and Gravel Formation, Croxton Sand and Gravel Member Glaciofluvial Deposits, Kesgrave Catchment Subgroup, Taplow Gravel, Boynhill Gravel Member and Stanmore Gravel Formation
- **Secondary B Aquifers (Low sensitivity)**: Cover Sands
- **Secondary Undifferentiated Aquifer (negligible sensitivity)**: Lowestoft Formation – Diamicton and Head Deposits
- **Unproductive Strata**: Peat and Interglacial Lacustrine Deposits.

9.2.7 A review of the aquifer designations provided on Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) online map viewer (Defra, 2025) indicates that the bedrock deposits anticipated to be present within the Study Area of the Project are classified as follows:

- **Principal Aquifers (very high/high sensitivity)**: White Chalk Subgroup, Crag Group, Newhaven Chalk Formation, Red Crag Formation and Chillesford Church Sand Member
- **Secondary A Aquifers (medium sensitivity)**: Undifferentiated Thanet Formation, Lambeth Group, Claygate Member, Bagshot Formation and Harwich Formation
- **Unproductive Strata (negligible sensitivity)**: Thames Group and London Clay Formation.

9.2.8 Principal and Secondary Aquifers are described by the Environment Agency as rock layers that '*provide significant quantities of drinking water, and water for business needs. They may also support rivers, lakes, and wetland*' (Environment Agency, 2024).

9.2.9 Secondary A Aquifers are described by the Environment Agency as '*permeable layers that can support local water supplies and may form an important source of base flow to rivers*' (Environment Agency, 2024).

9.2.10 Secondary B Aquifers are described by the Environment Agency as '*mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks and openings or eroded layers*' (Environment Agency, 2024).

9.2.11 The Secondary Undifferentiated Aquifer classification is applied by the Environment Agency '*where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value*' (Environment Agency, 2024).

9.2.12 Unproductive Strata are described by the Environment Agency as '*largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them*' (Environment Agency, 2024).

Groundwater Source Protection Zones

9.2.13 A groundwater source protection zone (SPZ) is a zone placed around a groundwater source, such as a well, borehole or spring, by the Environment Agency to protect a drinking water supply from pollution. Groundwater SPZs are generally split into three zones showing the level of risk to a groundwater source from contamination.

9.2.14 A SPZ 1 (very high sensitivity) is defined as the inner zone which is a 50-day travel time of a pollutant to the abstraction point. A SPZ 2 Outer Zone (medium sensitivity) is defined as a 400-day travel time of a pollutant to the abstraction point. A SPZ 3 (low sensitivity) is defined as the total catchment, which is the area around an abstraction point within which all the groundwater ends up at the abstraction (Environment Agency, 2019).

9.2.15 Defra's MAGIC map (Defra, 2025) indicates that most of the Study Area within Sections A, B, C, D, E and H are within a groundwater SPZ 3. However, there are also parts of those sections that are not within any SPZ.

9.2.16 In addition to the SPZ 3, the following higher sensitivity groundwater SPZs are also present within the Order Limits, ordered from north to south, and presented on Figure 9.5: Hydrogeology and Hydrogeological Receptors (document reference 6.9.F5):

- A SPZ 2 is located in the north of Section A: South Norfolk, to the east of Mangreen Quarry. The Project within this section of the Order Limits comprises use of the existing road infrastructure
- A SPZ 2 is located within Section B at Ofton and Bramford Substation. The Project within this area of the Order Limits includes proposals for the undergrounding of third-party infrastructure and for access

- A SPZ 1 and corresponding SPZ 2 is located to the south of Higham around the River Stour within Section C. The Project within this area of the Order Limits includes proposals for the undergrounding of cables however the working area for the underground cables have been clipped to be outside of the SPZ 1
- A SPZ 2 is present to the west of Linford in Section H. The Project within this area of the Order Limits includes proposals for the modification of existing assets.

9.2.17 In addition, the following groundwater SPZs have been identified within the Study Area, ordered from north to south, and presented on Figure 9.5: Hydrogeology and Hydrogeological Receptors (document reference 6.9.F5):

- A SPZ 1 is located just inside the Study Area for Section A: South Norfolk at Cargate Common, and the associated SPZ 2 extends around the SPZ1 and further into the Study Area of this Section
- A SPZ 2 is located within Section B to the west of Needham Market and to the south-east of the Order Limits
- A SPZ 1 is located within Section B to the north-east of Bramford Substation and to the north of the Order Limits
- A SPZ 2 is present to the south-east of the Order Limits at Stratford St Mary within Section C
- A SPZ 1 is located to the north of the Order Limits at Ford Street within Section D of the Study Area
- A SPZ 1 is located to the east of the Order Limits partially within the Study Area to the west of Linford within Section H.

9.2.18 Defra's MAGIC map (Defra, 2025) also indicates that a small part of the Order Limits in the north of Section A is located within a groundwater Drinking Water Safeguarded area.

Groundwater Vulnerability

9.2.19 Defra's MAGIC Map (Defra, 2025) indicates that the groundwater within the Study Area is generally classified as 'Medium' vulnerability. Small discrete sections of the Study Area are classified as 'unproductive' or 'Low' vulnerability, where Peat or unproductive bedrock (such as the Thames Group) are located, and 'Medium-High' vulnerability generally where more granular superficial deposits are present over the bedrock. 'High' vulnerability is located where Principal Aquifer bedrocks are present with no overlying low permeability superficial deposits protecting the aquifer (for example where the Red Crag is present and not protected by any overlying superficial deposits). The high vulnerability areas are extremely limited within the Study Area.

9.2.20 The Environment Agency (2017) define High vulnerability as '*Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits*' and areas of Low vulnerability as '*Areas that provide the greatest protection to groundwater from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability*'. Medium vulnerability is described as intermediate between Low and High vulnerability.

Groundwater Bodies

9.2.21 The Study Area crosses the following Water Framework Directive groundwater bodies (Environment Agency, 2025) shown in Table A9.3.1.

Table A9.3.1 Groundwater bodies crossed by the Study Area

Groundwater Body	Project Section	Quantitative Status	Chemical Status	Overall Status
Broadland Rivers Chalk and Crag Water Body (ref: GB40501G400300)	Section A, northern part of Section B	Poor	Poor	Poor
Cam and Ely Ouse Chalk (Ref: GB40501G400500)	Limited parts in the western of Section A and B around Diss	Poor	Poor	Poor
Waveney and Suffolk East Chalk and Crag Water Body (Ref: GB40501G400600)	Southern part of the Section B and northern part of Section C	Poor	Poor	Poor
North Essex Chalk (Ref: GB40501G400700)	Central part of the Section C	Poor	Poor	Poor
Essex Gravels (Ref: GB40503G000400)	Southern part of Section C, Section D, Section E, Section F, Section G, majority of Section H	Good	Poor	Poor
South Essex Lower London Tertiaries (ref: GB40602G401000)	Located between Chadwell St Mary and Tilbury within Section H	Good	Good	Good

Abstraction Data

Licensed and Deregulated Groundwater Abstractions

9.2.22 Information providing licenced groundwater abstractions and deregulated groundwater abstractions has been provided by the Environment Agency in response to a data request.

9.2.23 Table A9.3.10 and Table A9.3.11, in Annex 1, presents the licensed groundwater abstractions and Table A9.3.12 and Table A9.3.13, in Annex 1, presents deregulated groundwater abstractions within the Study Area, the locations of which are shown on Figure 9.5: Hydrogeology and Hydrogeological Receptors (document reference 6.9.F5).

9.2.24 An assessment of the potential for impacts related to the Project, on each of the licensed and deregulated groundwater abstractions within the Study Area has been undertaken and is presented in the tables within Annex 1.

Private Water Supplies

9.2.25 Data describing private water supplies has been provided by the following councils: South Norfolk Council (Section A), Babergh and Mid Suffolk District Councils (Section B and the northern part of Section C), Tendring District Council (south-east part of Section C), Colchester City Council (Section D) Braintree District Council (Section E) and Chelmsford City Council (part of Section F).

9.2.26 Basildon Borough Council (part of Section G), Brentwood Borough Council (part of Section F and G) and Thurrock Council (Section H) have confirmed that there are no private water supplies within their district.

9.2.27 The information received is presented in Table A9.3.14 to Table A9.3.19 in Annex 2, and the locations presented on Figure 9.5: Hydrogeology and Hydrogeological Receptors (document reference 6.9.F5), with the exception of the South Norfolk data. Due to South Norfolk Councils General Data Protection Regulation (GDPR) rules, the locations of the PWS have not been shown on Figure 9.5: Hydrogeology and Hydrogeological Receptors (document reference 6.9.F5) and location data has not been included within the tables within Annex 2 of this document. However, the PWS data provided by South Norfolk is presented in Annex 2 with the number reference provided with the data.

9.2.28 An assessment of the potential for impacts related to the Project, on each of the private water supplies is provided within the Study Area has been undertaken and is presented within the tables in Annex 2.

British Geological Survey Water Well Data

9.2.29 The BGS have a data set containing water well data from their archive of borehole records. This data has been obtained and where a BGS water well point has been identified that doesn't appear on the lists of licensed groundwater supplies, deregulated groundwater supplies and private water supplies detailed in Annex 1 and Annex 2, these have been captured in Table A9.3.20 and A9.3.21 within Annex 3 and an assessment of the potential for impacts related to the Project, on each of the locations undertaken.

9.3 Methodology

9.3.1 This preliminary risk assessment for groundwater has been based on standard industry guidance provided within the Construction Industry Research and Information Association (CIRIA) report C552, Contaminated Land Risk Assessment (CIRIA, 2001). To determine the risk to the identified receptor, both the probability (Table A9.3.2) and the degree of harm to a potential receptor (consequence) (Table A9.3.3) are used and the risk estimated using the matrix in Table A9.3.4. The risk classifications are defined in Table A9.3.5. The receptor sensitivity for hydrogeology receptors is provided within Table 9.2 of Chapter 9: Contaminated Land, Geology and Hydrogeology (document reference 6.9).

Table A9.3.2 Classification of probability

Classification	Definition
High likelihood	There is a linkage and an event either appears very likely in the short-term and almost inevitable over the long-term, or there is already evidence at the receptor of harm.
Likely	There is a linkage, and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low likelihood	There is a linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter-term.
Unlikely	There is a linkage, but circumstances are such that it is improbable that an event would occur even in the very long-term.

Table A9.3.3 Classification of consequence

Classification	Examples
Severe	Controlled water effect – short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Equivalent to Environment Agency Category 1 incident (persistent and/or extensive effects on water quality leading to closure of potable abstraction point or loss of amenity, agriculture or commercial value. Major fish kill. Ecological effect – short-term exposure likely to result in a substantial adverse effect. Major or irreversible change to groundwater aquifer(s) flow, water levels, quality or available yield. Groundwater resource use/abstraction is irreparably impacted upon, with a major or total loss of an existing supply or supplies.
Medium	Controlled water effect – equivalent to Environment Agency Category 2 incident requiring notification of abstractor. Ecological effect – short-term exposure may result in a substantial adverse effect. Moderate long term or temporary significant changes to groundwater aquifer(s) flow, water level, quality or available yield which results in moderate long term or temporarily significant decrease in resource availability. Groundwater resource use/abstraction is impacted slightly, but existing supplies remain sustainable.
Mild	Controlled water effect – equivalent to Environment Agency Category 3 incident (short lived and/or minimal effects on water quality). Ecological effect – unlikely to result in a substantial adverse effect. Minor changes to groundwater aquifer(s) flow, water level, quality or available yield leading to a noticeable change, confined largely to the Project area. Changes to water table level, groundwater quality and yield result in little discernible change to existing resource use.

Classification	Examples
Minor	Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Very slight change from groundwater baseline conditions, approximating to 'no change' conditions. Dewatering effects create no or no noticeable effects.

Table A9.3.4 Classification of risk

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High	High	Moderate	Low
	Likely	High	Moderate	Moderate	Low
	Low Likelihood	Moderate	Moderate	Low	Very low
	Unlikely	Low	Low	Very low	Very low

Table A9.3.5 Risk rating definitions

Risk Classification	Description
Very high	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability.
High	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability.
Moderate	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild.
Low	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

9.4 Qualitative Groundwater Risk Assessment

Overhead Line

9.4.1 There is proposed to be approximately 159 km of new overhead line supported on approximately 509 pylons, as described in Chapter 4: Project Description (document reference 6.4).

Dewatering

9.4.2 It is anticipated that for large sections of the new overhead line, groundwater will be below the base of the excavations required to construct the pylon bases. In conjunction with the relatively small footprint of such excavations therefore, large scale dewatering (where groundwater is actively lowered below a specific pre-planned level) is not anticipated to be required within sections of new overhead line, and consequently significant changes to groundwater levels and flows is not anticipated.

9.4.3 Following completion of ground investigation and detailed design, if dewatering is proposed for any locations within new overhead line, then a Hydrogeological Risk Assessment, in accordance with commitment GH11 in the Outline Code of Construction Practice (CoCP) (document reference 7.2) will be undertaken.

New Flow Pathways

9.4.4 Ground disturbance during construction could create new groundwater flow pathways, where permeable materials or flow routes are introduced by piling or through permeable backfill material, allowing movement of existing contamination or mixing of aquifers. However, as described in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1) a generally very low/low risk of significant existing contamination is anticipated to be present within the majority of the Order Limits.

9.4.5 A worst-case very high risk of potential existing contamination has been identified within one area of the overhead line sections of the Project, associated with the former Royal Air Force (RAF) Boxted, and assessed as presenting a potential high risk to identified receptors. In this area further assessment will need to be undertaken at this location in accordance with commitment GH10 within the Outline CoCP (document reference 7.2), requiring that prior to construction the site is investigated and assessed in accordance with Land Contamination Risk Management (LCRM) (Environment Agency, 2023) to enable the conceptual site model and risk assessment to be refined, and to determine any additional mitigation measures or remediation requirements.

9.4.6 In addition to the above, commitment GH02 within the Outline CoCP (document reference 7.2) requires the selection of appropriate piling techniques (to minimise the risk of the creation of new flow pathways) and requires a foundation works risk assessment (FWRA) to be undertaken at all locations where piling is proposed.

9.4.7 Therefore, with the implementation of the standard mitigation, risks associated with the creation of new groundwater flow pathways are considered to be very low.

Underground Cables (open cut method)

9.4.8 The depth of the trenches for sections of underground cables being constructed via opencut methods are anticipated to be typically around 1.2 m depth below ground level

(bgl) with the joint bays needing to extend to around 2.0 m bgl as described in Chapter 4: Project Description (document reference 6.4).

Dewatering

9.4.9 It is anticipated that for the majority of the open cut trenches, groundwater will be below the base of the relatively shallow excavations required. Therefore, large scale dewatering (where groundwater is actively lowered below a specific pre-planned level) is not anticipated to be required within sections of open cut trenches, and consequently significant changes to groundwater levels and flows is not anticipated.

9.4.10 Following completion of ground investigation and detailed design, if dewatering is proposed for any open cut trenches, then a Hydrogeological Risk Assessment, in accordance with commitment GH11 in the Outline CoCP (document reference 7.2) will be undertaken.

New Flow Pathways

9.4.11 Ground disturbance during construction could create new groundwater flow pathways, where permeable materials or flow routes are introduced through trenches or permeable backfill material, allowing movement of existing contamination or mixing of aquifers. However, as described in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1) a generally very low/low risk of significant existing contamination is anticipated to be present within the majority of the Order Limits. Therefore, there is considered to be a very low risk of mobilising any existing contamination, through ground disturbance.

9.4.12 A worst-case very high risk of potential existing contamination has been identified within two areas of the underground cables sections of the Project associated with the former RAF Raydon (Section C) and Rookery Farm Historical Landfill (Section B). These areas have been assessed as presenting a High and Low risk respectively, to identified receptors. Therefore, for RAF Raydon further assessment will need to be undertaken in accordance with commitment GH10 within the Outline CoCP (document reference 7.2), requiring that prior to construction the site is investigated and assessed in accordance with Land Contamination Risk Management (LCRM) (Environment Agency, 2023) to enable the conceptual site model and risk assessment to be refined, and to determine any additional mitigation measures or remediation requirements.

9.4.13 It is considered that the open cut trenches are unlikely to connect two aquifer units due to the shallow depth of the excavations required and the anticipated depth of the groundwater (below the base of the excavations).

Underground Cables (trenchless crossings)

9.4.14 Up to five trenchless crossings are proposed to facilitate construction of the Project, as described in Chapter 4: Project Description (document reference 6.4). These comprise a crossing underneath Higham Road, a split crossing of the River Stour (north and south), crossing of the A12 highway and a railway crossing east of Ardleigh. All the trenchless crossings are located within Section C.

9.4.15 The trenchless crossings would be installed using a drilling or boring method to pass beneath the features. Three construction methodologies for the trenchless crossings have been proposed, these include horizontal directional drilling (HDD), pipe jacking or direct pipe. The construction methodology will be confirmed following further micro-

siting and detailed engineering design which will be undertaken post consent. A description of these construction methodologies are included within Appendix 9.4: Hydrogeological Risk Assessment (document reference 6.9.A4).

9.4.16 The following assumptions have been made for this assessment:

- Trenchless crossings would reach a maximum depth of 12 m below ground level (bgl)
- The depth of any launch and reception pits for HDD and direct pipe, if required, is assumed to be approximately 1.2 m bgl. These methods don't require dewatering themselves, however dewatering of the launch/reception pits may be required
- Shafts required for pipe jacking would be constructed utilising sheet piles, or similar. Any groundwater would then be pumped out from the centre, to create a dry working environment for the tunnel boring machine, rather than large-scale dewatering to actively lower the groundwater table.

Higham Road

9.4.17 The Higham Road crossing is located directly to the north of the River Stour crossing and is proposed to be approximately 320 m in length. A hydrogeological risk assessment (HgRA) undertaken specifically for the crossing of the River Stour but including details relevant to the Higham Road crossing (due to proximity), is included as Appendix 9.4 Hydrogeological Risk Assessment (document reference 6.9.A4). The HgRA provides site specific information on the baseline conditions at this location, a summary of which is presented below.

9.4.18 The BGS geological mapping indicates that the Thames Group is anticipated to be present underlying the superficial River Terrace Deposits. The White Chalk Subgroup is indicated to be present at a depth beneath the Thames Group.

9.4.19 A preliminary ground investigation at the River Stour trenchless crossing locations has been undertaken and included four boreholes completed within the vicinity of Higham Road, generally confirms the sequence of anticipated strata described above. A summary of the ground conditions encountered is presented in Appendix 9.4: Hydrogeological Risk Assessment (Appendix 6.9.A4).

9.4.20 Groundwater was encountered during drilling at a depth of 8.50 m bgl to the north of Higham Road, in the Thanet Formation/Lambeth Group, rising to 7.22 m bgl after 20 minutes. To the south of Higham Road, the groundwater was encountered at much shallower levels of 0.5 m bgl, with no rise noted, and 0.9 m bgl, rising to 0.8 m bgl. Both strikes were encountered within the Alluvium.

9.4.21 Based on the ground investigation information, it is anticipated that this crossing would commence within the superficial River Terrace Deposits (to the north of Higham Road), before entering the Thanet Formation and Lambeth Group (Undifferentiated) (based on a maximum crossing depth of 12 m) for the majority of its length, before exiting in the Alluvium. A significant thickness of the Thanet Formation and Lambeth Group (Undifferentiated) (>10 m) is anticipated between the base of the crossing and the Chalk underlying the Thanet Formation and Lambeth Group. There is therefore anticipated to be a significant thickness of low permeability strata preventing vertical flow between the units.

9.4.22 One private water supply (groundwater abstraction) has been identified within the Study Area, approximately 420 m to the south-east of the Order Limits, known as Glebe

House, School Lane. Details of the source strata for this abstraction are currently unknown.

Dewatering

9.4.23 The ground investigation confirms that groundwater was encountered at 8.5 m bgl to the north of Higham Road, and between 0.5 m and 0.9 m to the south of Higham Road, therefore groundwater is likely to be intercepted during construction. The trenchless crossing methods do not require dewatering to facilitate installation, with the exception of the launch/reception pits for potential HDD or direct pipe methods. Therefore, as groundwater may be encountered in the launch/reception pits during construction to the south of Higham Road, dewatering may be required at these locations, which could have a localised impact on groundwater levels.

9.4.24 The nearest groundwater abstraction, as detailed above, is anticipated to be located approximately 575 m from the launch/reception pits to the south of Higham Road, however the abstracting strata of this abstraction is unknown. Therefore, a dewatering radius of influence calculation has been completed for the launch/reception pits to the south of Higham Road closest to the abstraction.

9.4.25 For the calculation, the hydraulic conductivity of silty sand has been used within the calculation (based on the Alluvial material likely to be encountered at the pit locations and the potential for more sand rich layers to be present), as described by Freeze and Cherry (1979), which quotes a hydraulic conductivity of between 10^{-7} m/s and 10^{-3} m/s. As a sensitivity test the median of 10^{-5} m/s as well as the highest and lowest extents published have been selected.

9.4.26 The expected maximum groundwater level at this location, based on ground investigation data, is 0.5 m bgl, based on the ground investigation data. This means that the drawdown of the groundwater level, in this situation would be approximately 0.7 m, based on a pit depth of 1.2 m. A conservative pit depth of 2 m has been used in the assessment below to allow for any variations within the pit depth or the groundwater depth.

9.4.27 Table A9.3.6 presents the inputs and results of the radius of influence calculations.

Table A9.3.6 Input and results for calculating the radius of influence for dewatering drawdown at Higham Road trenchless crossing

Parameter	Highest Hydraulic Conductivity	Median Hydraulic Conductivity	Lowest Hydraulic Conductivity
Expected groundwater level (m bgl)	0.5	0.5	0.5
Hydraulic Conductivity, K, (m/s)	1×10^{-7}	1×10^{-5}	1×10^{-3}
Drawdown, s (m)	1.5	1.5	1.5
Factor, C	2000	2000	2000
Total radius of influence, R_0 (m)	**0.95**	**9.49**	**94.87**

9.4.28 Based on the information presented above the total radius of influence, even at its most conservative hydraulic conductivity (and using the worst-case groundwater levels (highest) and pit depths (deepest)), is significantly less than the distance from the pit to the receptor, therefore there is unlikely to have an impact on identified sensitive receptors.

9.4.29 In relation to pipe jacking, as dewatering that actively lowers the groundwater table is unlikely to be required and groundwater abstractions have not been identified within 500 m of the shaft locations there is unlikely to be any impact on groundwater from this construction method.

9.4.30 If dewatering is found to be required following detailed design, that wasn't anticipated and included within this assessment, a Hydrogeological Risk Assessment will be required to be undertaken to assess the specific risks to groundwater and groundwater receptors and identify any additional mitigation or remediation that may be required, in accordance with commitment GH11 in Outline CoCP (document reference 7.2). Therefore, risks to groundwater and groundwater receptors from dewatering are considered to be low.

New Flow Pathways and Connection of Aquifers

9.4.31 Ground disturbance during construction could create new groundwater flow pathways, where permeable materials or flow routes are introduced through permeable backfill material or through the construction of trenchless crossings, allowing movement of existing contamination or mixing of aquifers.

9.4.32 As shown in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1) a worst case low risk or very low risk is anticipated within the area of the Higham Road crossing for significant existing contamination being present. Therefore, there is considered to be a very low risk of mobilising contamination through ground disturbance.

9.4.33 The trenchless crossing is also unlikely to connect aquifers that are not already in hydraulic continuity and should not penetrate into the Chalk. The construction methods include bentonite/grout seals that will prevent new flow pathways and therefore aquifer mixing along new pathways is unlikely to occur.

9.4.34 Therefore, risks associated with the creation of new flow pathways/connection of aquifers are expected to be very low.

Impacts of Groundwater Flow

9.4.35 Following the installation of the cables, some of the crossing would lie below the water table. The cross-sectional area of the trenchless crossing would be relatively small compared to the wider aquifer, with groundwater able to freely flow around the cables. In addition, the crossing is anticipated to predominantly lie within the undifferentiated Thanet Formation and Lambeth Group, described as clay, sand and silt. Therefore, it is considered that the risk of impacts to groundwater flow is very low.

Introduction of New Contamination – Unplanned Losses of Drilling Fluids and Turbidity

9.4.36 The crossing is anticipated to be predominantly through the undifferentiated Thanet Formation and Lambeth Group, without interaction with the underlying Chalk. Therefore, the risk of unplanned losses of drilling fluids associated with fractures and fissures in the Chalk, is considered to be low.

9.4.37 There are no groundwater abstractions within 500 m of the crossing, and the crossing is not within a groundwater SPZ1. Therefore, impacts associated with any turbidity are considered to present a very low risk to receptors.

River Stour (north and south)

9.4.38 The crossing of the River Stour is split into a northern and southern crossing, as described in Chapter 4: Project Description. The northern corridor is proposed to be approximately 230 m in length with the southern corridor approximately 190 m in length. A HgRA has been undertaken for the crossing of the River Stour and is included as Appendix 9.4 Hydrogeological Risk Assessment (document reference 6.9.A4) which provides detailed information on the baseline conditions at this location, a summary of which is presented below. It is noted that the northern crossing is referenced as the western corridor in Appendix 9.4 Hydrogeological Risk Assessment (document reference 6.9.A4) and the southern crossing is referenced as the eastern corridor in Appendix 9.4 Hydrogeological Risk Assessment (document reference 6.9.A4).

9.4.39 The BGS geological mapping indicates that the Thanet Formation and Lambeth Group (Undifferentiated) is anticipated to be present underlying the superficial deposits which comprise Alluvium overlying River Terrace Deposits and Head Deposits. The White Chalk Subgroup is indicated to be present at depth beneath the Thanet Formation and Lambeth Group (Undifferentiated).

9.4.40 A preliminary ground investigation including boreholes within the vicinity of the River Stour generally confirms the anticipated geology with one exception. The exception to this is in the northern crossing where the Thanet Formation and Lambeth Group (Undifferentiated) was not encountered within the channel of the river. At this location the Chalk was directly overlain by superficial deposits; and this is likely due to channel incision and erosion of the Thanet Formation and Lambeth Group. A summary of the ground conditions are presented within Appendix 9.4: Hydrogeological Risk Assessment (document reference 6.9.A4).

9.4.41 Groundwater was encountered during the drilling of the boreholes and was struck at depths between 0.49 m and 2.45 m bgl generally in the Alluvium.

9.4.42 The baseline information indicates that the proposed southern crossing is located within a SPZ3 and the northern crossing within an SPZ2. The Project has undertaken liaison with relevant operators Essex and Suffolk Water, and Affinity Water, regarding the SPZs within the trenchless crossing areas; and information has been obtained for the abstraction boreholes that are protected by the SPZ's, with further details presented within Appendix 9.4: Hydrogeological Risk Assessment (document reference 9.3). The location of the Essex and Suffolk Water abstractions are located between 1.2 km and 2.3 km from the northern crossing. The exact locations of the Affinity Water abstractions have not been provided, however based on the information provided by Affinity Water, and other data reviewed (BGS hydrogeological map, BGS boreholes logs and aerial imagery) the abstractions are anticipated to be located approximately 650 m north east of the northern crossing. Information obtained from the operators confirms that all of these abstractions are from the Chalk. Private water supplies have not been identified within 500 m of the trenchless crossings for the River Stour.

9.4.43 Cross sections of the ground conditions based on the preliminary ground investigation information are shown as Figure 3.2 and Figure 3.3 in Appendix 9.4: Hydrogeological Risk Assessment (document reference 6.9.A4). These cross sections indicate that the southern crossing (labelled as the east crossing in in Appendix 9.4: Hydrogeological Risk Assessment (document reference 6.9.A4)) would commence within the superficial deposits but would predominantly lie within the Thanet Formation and Lambeth Group (Undifferentiated) (based on a maximum crossing depth of 12 m). A significant thickness of the Thanet Formation and Lambeth Group (Undifferentiated) is anticipated to be present between the base of the crossing and the Chalk underlying the Thanet Formation and Lambeth Group. There is therefore anticipated to be a significant thickness of low permeability strata preventing vertical flow between the units. The cross sections indicate that the northern crossing (labelled as the west crossing in Appendix 9.4: Hydrogeological Risk Assessment (document reference 6.9.A4)) will be entirely within the superficial Alluvium and River Terrace Deposits.

9.4.44 The following assessment is based on the assumption that intrusive works will remain outside of the SPZ1, if this changes as the design evolves, then Hydrogeological Risk Assessment in accordance with commitment GH11 will need to be undertaken.

Dewatering

9.4.45 The preliminary ground investigation has confirmed that shallow groundwater is likely to be present in the area of these trenchless crossings, and therefore groundwater is likely to be intercepted during construction. The trenchless crossing methods do not require dewatering to facilitate installation, with the exception of the launch/reception pits for potential HDD or direct pipe methods. Therefore, as groundwater may be encountered in the launch/reception pits during construction, dewatering may be required at the launch/receptor pits which could have a localised impact on groundwater levels.

9.4.46 The nearest groundwater abstraction is anticipated to be located approximately 650 m away from the trenchless crossings for the River Stour and is abstracting from the Chalk. Whilst the trenchless crossings for the River Stour are not anticipated to interact with the Chalk, a dewatering radius of influence calculation has been completed for the launch and reception pits of these crossings.

9.4.47 For the calculation, the hydraulic conductivity of silty sand has been used within the calculation (based on the Alluvial material likely to be encountered at the pit locations), as described by Freeze and Cherry (1979), which quotes a hydraulic conductivity of between 10^{-7} m/s and 10^{-3} m/s. As a sensitivity test the median of 10^{-5} m/s as well as the highest and lowest hydraulic conductivity quoted above have been selected.

9.4.48 The anticipated maximum groundwater level at this location, based on the ground investigation data, is 0.5 m bgl, however a conservative approach has been undertaken, and the groundwater level is assumed to be at surface for the calculation and although the pit depth is 1.2 m based on potential variations within the depth and to allow for a conservative assessment a pit depth of 2 m bgl has been used. Therefore, the drawdown for the calculation is considered to be 2 m.

9.4.49 Table A9.3.7 presents the inputs and results of the radius of influence calculations.

Table A9.3.7 Input and results for calculating the radius of influence for dewatering drawdown at the River Stour trenchless crossing

Parameter	Highest Hydraulic Conductivity	Median Hydraulic Conductivity	Lowest Hydraulic Conductivity
Expected groundwater level (m bgl)	0	0	0
Hydraulic Conductivity, K, (m/s)	1×10^{-7}	1×10^{-5}	1×10^{-3}
Drawdown, s (m)	2	2	2
Factor, C	2000	2000	2000
Total radius of influence, R_0 (m)	**1.26**	**12.65**	**126.49**

9.4.50 The River Stour Trenchless Crossing is not anticipated to interact with the Chalk, which is the strata from which the closest groundwater abstraction to this proposed crossing is abstracting. Therefore, the proposed crossing will not have an impact on the groundwater abstraction. Even if the crossing did interact with the Chalk, and dewatering was required, the abstraction is located over 500 m outside of the total radius of influence calculated for the dewatering of the launch and reception pits and therefore there would be no impact on the abstraction.

9.4.51 In relation to pipe jacking, as dewatering that actively lowers the groundwater table is unlikely to be required and groundwater abstractions have not been identified within 500 m of the shaft locations there is unlikely to be any impact on groundwater from this construction method.

9.4.52 If dewatering is found to be required following detailed design, that wasn't anticipated and included within this assessment, a Hydrogeological Risk Assessment will be required to be undertaken to assess the specific risks to groundwater and groundwater receptors and identify any additional mitigation or remediation that may be required, in accordance with commitment GH11 in Outline CoCP (document reference 7.2). Therefore, risks to groundwater and groundwater receptors from dewatering are considered to be low.

New Flow Pathways and Connection of Aquifers

9.4.53 Ground disturbance during construction could create new groundwater flow pathways, where permeable materials or flow routes are introduced through permeable backfill material or through the construction of trenchless crossings, allowing movement of existing contamination or mixing of aquifers.

9.4.54 As shown in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1) a worst-case very low risk is anticipated within the area of the River Stour for significant existing contamination being present. Appendix 9.4: Hydrogeological Risk Assessment (document reference 6.9.A4) concludes that the risk of groundwater contamination during construction is unlikely for both cable corridors. Therefore, there is considered to be a very low risk of mobilising contamination through ground disturbance.

9.4.55 The trenchless crossings are also unlikely to connect aquifers that are not already in hydraulic continuity and should not penetrate into the Chalk. The construction methods include bentonite/grout seals that will prevent new flow pathways and therefore aquifer mixing due to new pathways is unlikely to occur

9.4.56 Therefore, risks associated with the creation of new flow pathways/connection of aquifers are expected to be very low.

Impacts of Groundwater Flow

9.4.57 Following the installation of the cables, parts of the crossings would lie below the water table. The cross-sectional area of the trenchless crossings would be relatively small compared to the wider aquifer, with groundwater able to freely flow around the cables. In addition, the crossings are anticipated to predominantly lie within strata described as clay, sand and silt. Therefore, it is considered that the risk of impacts to groundwater flow is very low.

Introduction of New Contamination – Unplanned Losses of Drilling Fluids and Turbidity

9.4.58 During the construction of the trenchless crossings there is the potential to increase turbidity within the aquifer and also for the unplanned breakout of drilling fluids which could have an impact on nearby groundwater abstractions and other groundwater receptors. An assessment of the risks from turbidity and drilling fluids, included in

> Appendix 9.4: Hydrogeological Risk Assessment (document reference 6.9.A4) determines that the risk to groundwater from turbidity and drilling fluids is moderate/low. This is in part due to the crossings not interacting with/penetrating into the Chalk, and because in many places the Chalk is also protected by an overlying layer of cohesive material (clays or structureless/marly chalk). In addition, the crossing is not located within a SPZ 1.

9.4.59 With the implementation of commitments GH01 and GH12 within the Outline CoCP (document reference 7.2), and the measures proposed in the unplanned losses of drilling fluid section (below), risks to groundwater associated with turbidity and the loss of drilling fluids can be reduced to low.

A12 Highway Crossing

9.4.60 The crossing of the A12 highway will be undertaken to the east of Langham and is proposed to be approximately 150 m in length.

9.4.61 The BGS geological mapping indicates that the Thames Group is anticipated to be present underlying the superficial deposits (sand and gravel). The White Chalk Subgroup is indicated to be present at depth beneath the Thames Group.

9.4.62 A review of historical borehole and trial pit records available on the BGS website (Geoindex), undertaken for the construction of the A12 - generally confirms the anticipated geological sequence described above. The superficial sands and gravels are recorded on the historical exploratory hole records between about 0.6 m and 1.4 m in thickness, with the underlying Thames Group encountered to at least a depth of 15.5 m bgl. Groundwater was generally recorded as not encountered on the historical exploratory hole records reviewed.

9.4.63 Based on the information obtained from the BGS, the crossing would commence in the superficial sands and gravels, quickly transitioning to the Thames Group with the

majority of the crossing remaining within this strata (based on a maximum crossing depth of 12 m).

9.4.64 A deregulated groundwater abstraction is located approximately 220 m south of the crossing known as Stone Cottage. The source strata for the abstraction is currently unknown.

Dewatering

9.4.65 The historical information obtained from the BGS indicates that groundwater was not encountered in the exploratory holes. The trenchless crossing methods do not require dewatering to facilitate installation, with the exception of the launch/reception pits for potential HDD or direct pipe methods. Therefore, based on a maximum pit depth of 1.2 m bgl the launch/reception pits for this crossing are unlikely to interact with groundwater and therefore dewatering is not anticipated to be required at this location.

9.4.66 In relation to pipe jacking, as dewatering that actively lowers the groundwater table is unlikely to be required there is unlikely to be any impact on groundwater from this construction method.

9.4.67 If dewatering is found to be required following detailed design, that wasn't anticipated and included within this assessment, a Hydrogeological Risk Assessment will be required to be undertaken to assess the specific risks to groundwater and groundwater receptors and identify any additional mitigation or remediation that may be required, in accordance with commitment GH11 in Outline CoCP (document reference 7.2). Therefore, risks to groundwater and groundwater receptors from dewatering are considered to be low.

New Flow Pathways and Connection of Aquifers

9.4.68 Ground disturbance during construction could create new groundwater flow pathways, where permeable materials or flow routes are introduced through permeable backfill material or through the construction of trenchless crossings, allowing movement of existing contamination or mixing of aquifers.

9.4.69 As shown in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1), a worst case low risk or very low risk is anticipated within the area of the A12 crossing for significant existing contamination being present. Therefore, there is considered to be a very low risk of mobilising contamination through ground disturbance.

9.4.70 The trenchless crossing is also unlikely to connect aquifers as it commences within one aquifer and then transitions into unproductive strata and does not penetrate into the Chalk. The construction methods include bentonite/grout seals that will prevent new flow pathways and therefore aquifer mixing due to new pathways is unlikely to occur.

9.4.71 Therefore, risks associated with the creation of new flow pathways/connection of aquifers are expected to be very low.

Impacts of Groundwater Flow

9.4.72 Following the installation of the cables, some of the crossing may lie below the water table, however the groundwater depth within this area is currently unconfirmed, although the historical exploratory hole records generally did not encounter groundwater at depths of up to 3 m. The cross-sectional area of the trenchless crossing would be relatively small compared to the wider aquifer, with groundwater able to freely flow around the cables. However, the crossing is anticipated to predominantly lie within the

Thames Group which is classed as unproductive strata and groundwater flow limited. Therefore, it is considered that the risk of impacts to groundwater flow is very low.

Introduction of New Contamination – Unplanned Losses of Drilling Fluids and Turbidity

9.4.73 The crossing is anticipated to be predominantly through the Thames Group, without interaction with the underlying Chalk. Therefore, the risk of unplanned losses of drilling fluids associated with fractures and fissures in the Chalk, is considered to be low.

9.4.74 The crossing is not within a groundwater SPZ and although there is a groundwater abstraction 220 m from the crossing – the abstraction is licenced for general agriculture, rather than potable supply. Therefore, impacts associated with any turbidity are considered to present a very low risk to sensitive receptors.

Railway crossing (east of Ardleigh)

9.4.75 The crossing of the railway east of Ardleigh is proposed to be approximately 100 m in length.

9.4.76 The BGS geological mapping indicates that the Thames Group is anticipated to be present underlying Cover Sands. The White Chalk Subgroup is indicated to be present at depth beneath the Thames Group.

9.4.77 A review of historical exploratory hole records (borehole at Glebe Corner and well at Abbott's Cottage) on the BGS website (Geoindex) generally confirms the anticipated geological sequence described above, however a thin layer of clay rich material was identified overlying the Cover Sands to a depth of approximately 1.5 m. The Cover Sands were described as a mixture of sands and gravels and were approximately 5.5 m to 10 m in thickness. Underlying the Cover Sands the London Clay (Thames Group) was encountered to the maximum depth of 40 m and described as a blue clay. The Lambeth Group and Thanet Formation (Undifferentiated) and then White Chalk Subgroup were identified underlying the London Clay. The Chalk was identified at a depth of approximately 75 m bgl.

9.4.78 Information from an exploratory hole record at Glebe Corner (located 50 m south of the trenchless crossing) did not identify groundwater during drilling - to a maximum depth of 9.4 m bgl. Groundwater was encountered and recorded on the logs to the north-east of the crossing associated with a well at Abbott's Cottage, which recorded the 'rest' groundwater level at a depth of approximately 35 m bgl in the Chalk.

9.4.79 A groundwater monitoring borehole is identified on the Hydrology Data Explorer (Environment Agency, 2025) at Glebe Cottages located approximately 200 m south of the crossing location. A review of the data indicates the groundwater level at this well location fluctuates between approximately 3 m and 5 m bgl, however, the source strata is unknown but not anticipated to be the Chalk.

9.4.80 A number of abstractions are located within the area of the trenchless crossing with the nearest abstraction at Glebe Cottages where the monitoring borehole described above is located.

9.4.81 Based on the information reviewed, the crossing would commence in superficial sands and gravels, transitioning to the Thames Group, with the majority of the crossing remaining within this strata (based on the maximum crossing depth of 12 m).

Dewatering

9.4.82 The information obtained from the historical BGS boreholes and the Hydrology Data Explorer indicates that groundwater is unlikely to be intercepted by the launch/reception pits required for the potential HDD or direct pipe methods and therefore dewatering is not anticipated at this location.

9.4.83 In relation to pipe jacking, as dewatering that actively lowers the groundwater table is unlikely to be required there is unlikely to be any impact on groundwater from this construction method.

9.4.84 If dewatering is found to be required following detailed design, that wasn't anticipated and included within this assessment, a Hydrogeological Risk Assessment will be required to be undertaken to assess the specific risks to groundwater and groundwater receptors and identify any additional mitigation or remediation that may be required, in accordance with commitment GH11 in Outline CoCP (document reference 7.2). Therefore, risks to groundwater and groundwater receptors from dewatering are considered to be low.

New Flow Pathways and Connection of Aquifers

9.4.85 Ground disturbance during construction could create new groundwater flow pathways, where permeable materials or flow routes are introduced through permeable backfill material or through the construction of trenchless crossings, allowing movement of existing contamination or mixing of aquifers.

9.4.86 As shown in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1) a worst case low risk is anticipated within the area of the railway crossing for significant existing contamination being present. Therefore, there is considered to be a very low risk of mobilising contamination through ground disturbance.

9.4.87 The trenchless crossing is also unlikely to connect aquifers as it commences within one aquifer and then transitions into unproductive strata and does not penetrate into the Chalk. The construction methods include bentonite/grout seals that will prevent new flow pathways and therefore aquifer mixing due to new pathways is unlikely to occur.

9.4.88 Therefore, risks associated with the creation of new flow pathways/connection of aquifers are expected to be very low.

Impacts of Groundwater Flow

9.4.89 Following the installation of the cables, some of the crossing may lie below the water table. The cross-sectional area of the trenchless crossing would be relatively small compared to the wider aquifer, with groundwater able to freely flow around the cables. However, the crossing is anticipated to predominantly lie within the Thames Group which is classed as unproductive strata and groundwater flow limited. Therefore, it is considered that the risk of impacts to groundwater flow is very low.

Introduction of New Contamination – Unplanned Losses of Drilling Fluids and Turbidity

9.4.90 The crossing is anticipated to be predominantly through the Thames Group, without interaction with the underlying Chalk. Therefore, the risk of unplanned losses of drilling fluids associated with fractures and fissures in the Chalk, is considered to be low.

9.4.91 The crossing is not within a groundwater SPZ, and although there is a groundwater abstraction 200 m from the crossing, impacts associated with any turbidity are

considered to present a very low risk to receptors as the crossing is likely to predominantly be through unproductive strata. However, due to the proximity of the crossing to the abstraction a Hydrogeological Risk Assessment will be undertaken following detailed design, in accordance with commitment GH11 in Outline CoCP (document reference 7.2).

Introduction of New Contamination - Unplanned Losses of Drilling Fluids

9.4.92 During the process of drilling using trenchless crossing techniques, and particularly with Horizontal Directional Drilling (HDD), unplanned losses of drilling fluids can occur when the drilling bore encounters paths of lesser resistance, such as fractures, fissures or voids in the ground, and also when the strength and pressure of the ground overlying a trenchless bore is exceeded by the drilling fluid pressures. Unplanned losses of drilling fluids are often known as breakouts or frac outs.

9.4.93 Breakouts/frac outs are most likely to occur when the bore is in close proximity to the ground surface, for example near the launch and reception points, and where the strata may have inherent fractures and fissures (e.g. Chalk).

9.4.94 To mitigate the risk of potential breakouts of drilling fluid, a Drilling Fluid Breakout Method Statement will be developed by the Main Works Contractor(s) in accordance with commitment GH12 within the Outline CoCP (document reference 7.2).

9.4.95 The Drilling Fluid Breakout Method Statement will be informed by sufficient appropriate ground investigation to provide information on the strata that will be encountered during any trenchless bore, and the nature/properties of the strata.

9.4.96 The Drilling Fluid Breakout Method Statement will include the following information, as appropriate, the details of which will be added by the Main Works Contractor(s) in response to their understanding of the site-specific information:

- Detailed and appropriate design of all trenchless crossings including demonstration of a suitable drilling profile and depth to mitigate the risk of breakout
- Description of drilling procedure and demonstration of suitability, including removal of borehole cuttings during drilling
- Annular pressure monitoring
- Regular walkovers of the drill path to check for visible evidence of breakouts.

9.4.97 The Drilling Fluid Breakout Method Statement will also include contingency measures for the eventuality that a breakout occurs, to include as a minimum:

- Measures to limit the volume of the drilling fluid loss
- Measures to contain the lost drilling fluid
- Measures to remove the lost drilling fluid
- Measures to seal the area of the breakout
- Measures to provide any remediation, if appropriate.

East Anglian Connection Node, Tilbury North Substations and Cable Sealing End Compounds

9.4.98 The Project includes proposals for two new substations; the East Anglia Connection Node Substation located in Tendring to the east of Ardleigh and Tilbury North Substation located to the south of Orsett golf course and seven Cable Sealing End (CSE) compounds where the overhead line transitions to underground cables (and vice versa).

Dewatering

9.4.99 Dewatering is not expected to be required at the substation and CSE compound locations, therefore there is not likely to be a risk to groundwater flow or levels. In addition, the small overall diameter of any piled foundation solution required means there is a very low risk to groundwater flow pathways.

New Flow Pathways

9.4.100 Ground disturbance during construction could create new groundwater flow pathways, where permeable materials or flow routes are introduced through piling or through permeable backfill material, allowing movement of existing contamination or mixing of aquifers.

9.4.101 As shown in Appendix 9.1: Baseline Information and Preliminary Contamination Risk Assessment (document reference 6.9.A1) a potential source of contamination has not been identified at these locations. Therefore, there is considered to be a very low risk of mobilising contamination through ground disturbance.

9.4.102 Commitment GH02 in the Outline CoCP (document reference 7.2) requires the selection of appropriate piling techniques (to minimize the risk of the mixing of aquifers) and a Foundation Works Risk Assessment (to identify and minimize risks to groundwater) to be undertaken at all locations where piling is proposed, and therefore risks associated with creation of new flow/contamination pathways are expected to be very low.

9.5 Conclusion

General

9.5.1 This Qualitative Groundwater Risk Assessment provides an assessment of the potential risks to groundwater levels, quality and flow from the different elements of the Project, including overhead lines, CSE compounds, open cut trenches, trenchless crossings and the substations.

9.5.2 For each element of the Project, the risk assessment assesses the potential risks relating to dewatering, creation of new flow pathways, connection of aquifers, impacts on groundwater flow and the introduction of new contamination at trenchless crossings, including the unplanned loss of drilling fluids.

9.5.3 The assessment of the River Stour crossing is based on the assumption that intrusive works will remain outside of the SPZ1, if this changes as the design evolves, then Hydrogeological Risk Assessment in accordance with commitment GH11 will need to be undertaken.

Dewatering

9.5.4 The risk assessment has determined that dewatering (requiring lowering of groundwater levels rather than incidental pumping out of surface water ingress into excavations) within the Project is generally unlikely to be required for the majority of the elements of the Project. Therefore, the anticipated risks from dewatering and changes to groundwater levels are considered to be very low.

9.5.5 The following abstraction locations will be subject to additional Hydrogeological Risk Assessment in accordance with commitment GH11 in the Outline CoCP (document reference 7.2) and following detailed design:

- Abbotsfield, Ardleigh - Licensed Groundwater Abstraction (Licence number: 8/37/25/*G/0336)
- Two wells located at Sutton Hall Farm – Licensed Groundwater Abstraction (Licence number 8/37/25/*G/0236)
- Six Wellpoints – Rivenhall - Licensed Groundwater Abstraction (Licence number: 8/37/31/*G/0187)
- Bore at Palgrave Farm, Stowupland – Deregulated Groundwater Abstraction (Licence number: 7/35/08/*G/0086)
- Well at Gibbon's Farm, Battisford - Deregulated Groundwater Abstraction (Licence number: 7/35/08/*G/0042)
- Malting Farm, Ardleigh - Deregulated Groundwater Abstraction (Licence number: 8/37/25/*G/0104) and Malting Farm Private Water Supply
- Borehole at Glebe Cottage - Deregulated Groundwater Abstraction (Licence number: 8/37/25/*G/0306)
- No 2 Private Water Supply in South Norfolk
- Friesian Bungalow, 2 Wick Cottages and 1 Wick Cottages Private Water Supply in Tendring
- Fountains Farm, Ardleigh BGS Water Well Data set.

9.5.6 If dewatering is found to be required following detailed design, that wasn't anticipated and included within this assessment, a Hydrogeological Risk Assessment will be required to be undertaken to assess the specific risks to groundwater and groundwater receptors and identify any additional mitigation or remediation that may be required, in accordance with commitment GH11 in Outline CoCP (document reference 7.2). Therefore, risks to groundwater and groundwater receptors from dewatering are considered to be low.

New Flow Pathways and Connection of Aquifers

9.5.7 The risk assessment has determined that the Project elements are generally unlikely to form new flow pathways and connect previously unconnected aquifer units. Therefore, the risks to groundwater associated with creation of new flow/contamination pathways or connection of aquifer units is considered to be very low.

9.5.8 The assessment has also concluded that with the implementation of the commitments provided in the Outline CoCP (document reference 7.2) risk to groundwater from mobilization of existing contamination is anticipated to be very low.

Impacts on Groundwater Flow

9.5.9 The assessment has determined that the risk to groundwater flow from the trenchless crossings is considered to be very low.

Introduction of New Contamination at Trenchless Crossings

9.5.10 The risk assessment has concluded that the potential risks to identified groundwater receptors from unplanned losses of drilling fluids and turbidity during construction of the Project, is anticipated to be at worst moderate/low. This can be further reduced with implementation of commitment GH01 and GH12 in the CoCP (document reference 7.2).

Abbreviations

Abbreviation	Full Reference
bgl	Below ground level
BGS	British Geological Survey
CIRIA	Construction Industry Research and Information
CoCP	Code of Construction Practice
Defra	Department for Environment, Food and Rural Affairs
ES	Environmental Statement
FWRA	Foundation Works Risk Assessment
HDD	Horizontal Directional Drilling
HgRA	Hydrogeological Risk Assessment
LCRM	Land Contamination Risk Management
MAGIC	Multi-Agency Geographic Information for the Countryside
RAF	Royal Air Force
SPZ	Source Protection Zone

Glossary

Term	Definition
Aquifer	A subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater
Bedrock geology	Solid rock formations underlying superficial deposits
Break out / Frac out	Break out or Frac out are unplanned losses of drilling fluids
British Geological Survey	A public sector organisation who are responsible for advising the UK government on all aspects of geoscience as well as proving impartial geological advice to industry, academia and the public
Drinking water safeguarded zone	Area established to around public water supplies where additional pollution control measures are needed to reduce and prevent pollution of water abstracted for drinking water supplies
Groundwater	Water that is in the ground, this is usually referring to water in the saturated zone below the water table
Historical Landfill	Locations where there are records of waste being received to be buried but are now closed. This information held is collated from data held by Local Planning Authorities, the former Department of the Environment, British Geological Survey and the Environment Agency suspended authorised landfill licences
Hydrogeology	The properties of groundwater in superficial and bedrock geology
Order Limits	The maximum extent of land within which the authorised development may take place
Overhead Line	Conductor (wire) carrying electric current, strung from pylon to pylon.
Principal Aquifer	Rock layers the provide significant quantities of drinking water, and water for business needs. They also support rivers lakes and wetland
Pylon	Structures that support the overhead line (conductors). There are two types of pylons; suspension (line), where the conductors are simply suspended from the tower and tension (angle).
Receptor	The physical resource or user group that would respond to an effect e.g. somebody or something adversely affected by a pollutant
Secondary A Aquifer	Permeable layers that can support local water supplies and may form an important source of base flow to rivers
Secondary B Aquifer	Mainly lower permeability layers that may store and yield limited amounts of groundwater through characteristics like thin cracks and openings or eroded layers

Term	Definition
Secondary Undifferentiated Aquifer	Where it is not possible to apply either a Secondary A or B definition because of the variable characteristics of the rock type. These have only a minor value
Source Protection Zone	A zone placed around a groundwater source, such as a well, borehole or spring, by the Environment Agency to protect a drinking water supply from pollution
Source Protection Zone 1	The inner zone which is a 50-day travel time of a pollutant to the abstraction point
Source Protection Zone 2	A 400-day travel time of a pollutant to the abstraction point
Source Protection Zone 3	The total catchment, which is the area around an abstraction point within which all the groundwater ends up at the abstraction
Substation	Substations are used to control the flow of power through the electricity system. They are also used to change (or transform) the voltage from a higher to lower voltage to allow it to be transmitted to local homes and businesses.
Superficial geology	Uncemented sediments, such as alluvium, immediately beneath the soil and above the bedrock
Trenchless crossing	A crossing installation method that has limited above ground disturbance which is used to avoid a sensitive feature such as an environmental feature.
Underground cabling	An insulated conductor carrying electric current designed for underground installation. Underground cables link together two cable sealing end compounds.
Unproductive Strata	Largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them

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Annex A: Licenced and Deregulated Groundwater Abstractions

Table A9.3.8 Licenced groundwater abstractions within the Order Limits

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
8/37/25/*G/0336	ABBOTSFIELD ARDLEIGH	Agriculture, Spray Irrigation – Direct	N/A	0	C	The abstraction is located within the Order Limits and the Project proposals include a construction access track in close proximity to the abstraction. Whilst the Project proposals are not anticipated to have an impact on this abstraction, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
8/37/25/*G/0236	WELL AT ARDLEIGH - Sutton Hall Farm	Agriculture, Spray Irrigation – Direct	ESDGG EASTERN AREA – GLACIAL SANDS/ GRAVELS	0	C	The abstraction is located within the Order Limits and the Project proposals include for a temporary construction compound and attenuation drainage in close proximity to the abstraction. Whilst the Project proposals are not anticipated to have an impact on this abstraction, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this
8/37/25/*G/0236	WELL AT ARDLEIGH - Sutton Hall Farm	Agriculture, Spray Irrigation – Direct	ESDGG EASTERN AREA – GLACIAL	0	C	

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
			SANDS/GRAVELS			assessment and to define and agree any mitigation that may be required.
AN/037/0025/023	CROWN QUARRY, ARDLEIGH. COLCHESTER	Industrial, Commercial and Public Services – Dewatering	N/A	0	C	The abstraction is located within the Order Limits with the closest Project works comprising construction of overhead line, with the intrusive works located approximately 100 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Table A9.3.9 Licenced groundwater abstractions within the Study Area

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
AN/034/0013/036	BOREHOLE AT SWARDESTON NORFOLK	Industrial, Commercial and Public Services – Make-Up Or Top Up Water	ECHLK EASTERN AREA - CHALK	380	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/13/*G/0201	BOREHOLE AT MANGREEN HALL FARM, SWARDESTON	Agriculture, General Farming and Domestic	ESDGG EASTERN AREA - GLACIAL SANDS/GRAVELS	110	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/14/*G/0020	BORE AT THE WOODLANDS BR'N ASH	Agriculture, General Farming and Domestic	N/A	220	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
AN/034/0014/004	EXCAVATION AT CARLETON RODE, NORFOLK	Industrial, Commercial and Public Services – Other	ESDFG EASTERN AREA – FLUVIAL SANDS/ GRAVELS	400	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
AN/034/0016/007/R01	BOREHOLE 3 AT BRESSINGHAM	Agriculture, Spray Irrigation – Direct	N/A	350	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/16/*G/0072	BORE AT WEST END FM, MELLIS	Agriculture, General Farming and Domestic	N/A	305	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/17/*G/0047	BORE AT ABBEY FM, WICKHAM SK”TH	Agriculture, General Farming and Domestic	N/A	70	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/35/08/*G/0179	BORE AT DOLES FM, STOWUPLAND	Agriculture, General Farming and Domestic	N/A	40	B	The abstraction is not located within the Order Limits and due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
7/35/08/*G/0149	BORE AT GROVE FM, CREETING ST PETER	Industrial, Commercial And Public Services – Process Water	ECHLK EASTERN AREA – CHALK	60	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/35/09/*G/0031	WELL – FENN FARM, BURSTALL	Agriculture, Fish Farm/Cress Pond Throughflow	N/A	10	C	The abstraction is not located within the Order Limits and due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely
8/36/19/*G/0071	WENHAM GRANGE, LITTLE WENHAM	Agriculture, General Farming and Domestic	N/A	110	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely
8/37/25/*G/0251	18 COGGESHALL ROAD, ARDLEIGH	Agriculture, Spray Irrigation – Direct	ESDGG EASTERN AREA - GLACIAL SANDS/ GRAVELS	270	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
8/37/25/*G/0251	18 COGGESHALL ROAD, ARDLEIGH	Agriculture, General Farming and Domestic	ESDGG EASTERN AREA - GLACIAL SANDS/GRAVELS	255	C	quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0252	19 OAKTREE CORNER, ARDLEIGH	Agriculture, Spray Irrigation – Direct	ESDGG EASTERN AREA - GLACIAL SANDS/ GRAVELS	165	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0252	19 OAKTREE CORNER, ARDLEIGH	Agriculture, General Farming and Domestic	ESDGG EASTERN AREA - GLACIAL SANDS/ GRAVELS	175	C	
8/37/25/*G/0281	4 TUBEWELLS, BADLISS HALL	Agriculture, Spray Irrigation – Direct	ESDGG EASTERN AREA – GLACIAL SANDS/ GRAVELS	210	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
AN/037/0025/031	WELL POINT A AT NEW HOME FARM, ARDLEIGH	Agriculture, Trickle Irrigation – Storage	N/A	25	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
						any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
8/37/25/*G/0143	OLD SHIELDS FARM 1, ARDLEIGH	Agriculture, Spray Irrigation – Anti Frost	ESDGG EASTERN AREA – GLACIAL SANDS/ GRAVELS	190	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0143	OLD SHIELDS FARM 2, ARDLEIGH	Agriculture, Spray Irrigation – Anti Frost	ESDGG EASTERN AREA – GLACIAL SANDS/ GRAVELS	160	C	
8/37/25/*G/0064	BADLEY HALL FARM, ARDLEIGH	Agriculture, General Farming and Domestic	N/A	20	C	The abstractions are located close to the Order Limits and the Project proposals include a temporary construction compound in close proximity to the abstraction. Whilst the Project proposals are generally not anticipated to have an impact on the abstraction there are commitment measures in please to ensure appropriate storage and handling of fuels etc within the temporary construction
8/37/25/*G/0191	B/H, BADLEY HALL, ARDLEIGH	Agriculture, Spray Irrigation – Direct	N/A	30	C	
8/37/25/*G/0191	B/H, BADLEY HALL, ARDLEIGH	Agriculture, Spray Irrigation – Direct	N/A	30	C	

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
8/37/25/*G/0064	BADLEY HALL FARM, ARDLEIGH	Agriculture, General Farming and Domestic	N/A	40	C	compound. Therefore, the Project is unlikely to have an impact on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered unlikely.
8/37/25/*G/0064	BADLEY HALL MARKED A ON THE MAP	Agriculture, General Farming and Domestic	N/A	5	C	
8/37/25/*G/0223	HARTS LANE, ARDLEIGH	Agriculture, Spray Irrigation – Direct	N/A	235	C	The abstractions are not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0223	HARTS LANE, ARDLEIGH	Agriculture, Spray Irrigation – Direct	N/A	275	C	
8/37/25/*G/0223	HARTS LANE, ARDLEIGH	Agriculture, Spray Irrigation – Direct	N/A	300	C	
AN/037/0025/022	LAGOON AT CROWN QUARRY, ARDLEIGH	Industrial, Commercial And Public Services – Mineral Washing	ECHLK EASTERN AREA – CHALK	350	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
AN/036/0015/017	WELL AT BOXTED	Agriculture, Spray Irrigation – Direct	ESDGG EASTERN AREA – GLACIAL	405	D	The abstractions are not located within the Order Limits and the Project proposals closest to the borehole are not anticipated

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
			SANDS/ GRAVELS			to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
AN/036/0015/017	BOREHOLE AT BOXTED	Agriculture, Trickle Irrigation – Direct	ESDGG EASTERN AREA – GLACIAL SANDS/ GRAVELS	400	D	
8/37/23/*G/0079	4 HORKESLEY ROAD, BOXTED	Agriculture, Spray Irrigation – Direct	ESDFG EASTERN AREA – FLUVIAL SANDS/ GRAVELS	495	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/23/*G/0087	WELL, NEW BARN FM, GT. HORKESLEY	Agriculture, Spray Irrigation – Storage	ESDFG EASTERN AREA – FLUVIAL SANDS/ GRAVELS	75	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/23/*G/0092	B/H, GROVE FARM, GT. HORKESLEY	Agriculture, Spray Irrigation – Storage	ESDGG EASTERN AREA – GLACIAL	280	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
			SANDS/GRAVELS			impacts on the abstraction borehole are considered to be unlikely.
8/37/23/*G/0112	BOREHOLE AT GREAT HORKESLEY	Agriculture, General Farming and Domestic	N/A	180	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/23/*G/0071	POINT A (ALDHAM)	Water Supply – Transfer Between Sources (Pre Water Act 2003)	ECHLK EASTERN AREA – CHALK	240	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/23/*G/0098	WELL AT MILL RACE NURSERY, ALDHAM	Agriculture, Spray Irrigation – Direct	ESDFG EASTERN AREA – FLUVIAL SANDS/ GRAVELS	410	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
AN/037/0024/022	WELL AT W H COLLIER BRICKWORKS, MARKS TEY, COLCHESTER	Industrial, Commercial And Public Services – Dewatering	ESDFG EASTERN AREA – FLUVIAL SANDS/ GRAVELS	340	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/31/*G/0187	SIX WELLPOINTS – RIVENHALL	Agriculture, Spray Irrigation – Direct	N/A	10	E	The abstractions is located close to the Order Limits and the Project proposals include a construction access track in close proximity to the abstraction. Whilst the Project proposals are not anticipated to have an impact on this abstraction, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
8/37/34/*G/0040	EXCAV, ROXWELL QUARRY, ROXWELL	Agriculture, Spray Irrigation – Direct	N/A	165	F	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
8/37/56/*G/0032	HOME FARM, ORSETT	Agriculture, General Farming and Domestic	ESDFG EASTERN AREA – FLUVIAL SANDS/ GRAVELS	300	H	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
AN/037/0056/012/ R01	BOREHOLE AT ORSETT GOLF CLUB	Industrial, Commercial and Public Services, Spray Irrigation – Direct	ECHLK EASTERN AREA – CHALK	335	H	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely
8/37/56/*G/0006	WELL 1 AT POLWICKS, WEST TILBURY	Agriculture, General Farming and Domestic	N/A	100	H	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/56/*G/0006	WELL 2 AT POLWICKS, WEST TILBURY	Agriculture, General Farming and Domestic	N/A	75	H	

Table A9.3.10 Deregulated groundwater abstractions within the Order Limits

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
7/34/16/*G/0087	BOREHOLE AT WORTHAM SP	Agriculture - General Farming and Domestic	0	B	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.

Table A9.3.11 Deregulated groundwater abstractions within the Study Area

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
7/34/14/*G/0125	MANGREEN HALL NORTH SWARDESTON	Water Supply - General Use	280	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/14/*G/0023	BORE, MANGREEN HALL FM, SWAR”TON	Water Supply - Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household	185	A	
7/34/13/*G/0202	BORE AT LODGE FM,MULBARTON	Agriculture - General Farming and Domestic	475	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
7/34/14/*G/0098	BORE ADJ RAILWAY LINE,N.FLOT”N	Agriculture - General Farming and Domestic	390	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/14/*G/0077	BORE AT FLORDON HALL, FLORDON	Agriculture - General Farming and Domestic	180	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/14/*G/0052	WELL AT GROVE FM, FUNDENHALL	Agriculture, General Farming and Domestic	300	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/14/*G/0097	BORE AT PERSEHALL MANOR	Agriculture, General Farming and Domestic	415	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/14/*G/0014	BORE,OLD HALL FM, TIBENHAM	Agriculture, General Farming and Domestic	120	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/14/*G/0091	BORE AT LOW FM, TIBENHAM	Agriculture, General	195	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
		Farming and Domestic			quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/16/*G/0076	BOREHOLE AT WINFARTHING	Agriculture, General Farming and Domestic	405	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/16/*G/0024	WELL NR HOLLY FM,DISS	Agriculture, General Farming & Domestic	310	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/16/*G/0061	BORE AT GREEN FM,SHELFANGER	Agriculture, General Farming and Domestic	360	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/16/*G/0032	WELL AT SHELFANGER LODGE DISS	Agriculture, General Farming and Domestic	420	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/16/*G/0005	BORE AT DARROW WOOD FM, DISS	Agriculture, General Farming and Domestic	360	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
7/34/16/*G/0043	BORE AT BOUNDARY FM, DISS	Agriculture, General Farming and Domestic	370	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/16/*G/0017	BORE AT DARROW FM, ROYDON	Agriculture, General Farming and Domestic	40	A	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
7/34/16/*G/0050	BORE AT GROVE FM, ROYDON	Agriculture, General Farming and Domestic	20	A	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
7/34/17/*G/0028	BORE AT UPPER EASTLANDS FM,FIN	Agriculture, General Farming and Domestic	270	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/34/17/*G/0071	BOREHOLE AT MENDLESHAM	Agriculture, General Farming and Domestic	20	B	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
7/34/17/*G/0067	BOREHOLE CHALK - POTTERS FARM	Agriculture, General Farming and Domestic	10	B	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
7/34/17/*G/0008	BORE AT RED HOUSE FM, COTTON	Agriculture, General Farming and Domestic	50	B	The abstraction is located close to the Order Limits and the Project proposals include the construction of an access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
7/35/08/*G/0086	BORE AT PALGRAVE FM,STOWUPLAND	Agriculture, General Farming and Domestic	10	B	The Project proposals include for undergrounding works in close proximity to the abstraction. Whilst the Project proposals are not anticipated to have an impact on this abstraction, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
7/35/08/*G/0042	WELL AT GIBBON'S FM,BATTISFORD	Agriculture, General Farming and Domestic	35	B	The Project proposals include for undergrounding works in close proximity to the abstraction. Whilst the Project proposals are not anticipated to have an impact on this abstraction, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
7/35/08/*G/0037	WELL AT VALE FM,BATTISFOR	Agriculture, General Farming and Domestic	250	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/35/08/*G/0110	BORE AT HILL HOUSE FM,RINGSH”L	Agriculture, General Farming and Domestic	275	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/35/08/*G/0062	BORE AT HILL FM, SOMERSHAM	Agriculture, General Farming and Domestic	60	B	The abstraction is located close to the Order Limits and the Project proposals include the construction of an access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
7/35/08/*G/0082	BORE AT CALEY GREEN FM,L SOMER	Agriculture, General Farming and Domestic	30	B	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
7/35/08/*G/0049	BORE AT GUNN”S FM,SOMERSHAM	Agriculture, General Farming and Domestic	160	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
7/35/08/*G/0026	BORE AT LOVETOFTS FM,FLOWTON	Agriculture, General Farming and Domestic	330	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/35/09/*G/0010	WELL AT GROVE FM,FLOWTON	Agriculture, General Farming and Domestic	335	B	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/35/08/*G/0200	CHALK BOREHOLE - BRAMFORD	Agriculture, General Farming and Domestic	20	B	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
7/35/08/*G/0209	BOREHOLE AT BURS TALL HALL FARM	Agriculture, General Farming and Domestic	250	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
7/35/08/*G/0153	BORE AT FERRY BARN, SPROUGHTON	Agriculture, General Farming and Domestic	20	C	The abstraction is located close to the Order Limits and the Project proposals include construction of an access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
8/36/17/*G/0105	BOREHOLE AT HOLTON ST MARY	Agriculture, General Farming and Domestic	380	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/36/18/*G/0022	NIGHTINGALE FARM, LANGHAM	Agriculture, General Farming and Domestic	210	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/36/18/*G/0012	GROVE FARM, LANGHAM	Agriculture, General Farming and Domestic	205	C	
8/36/18/*G/0023	STONE COTTAGE, DEDHAM	Agriculture, General Farming and Domestic	150	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/36/18/*G/0011	BIRCHWOOD, DEDHAM	Agriculture, General Farming and Domestic	405	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0168	GODS HOUSE FARM, ARDLEIGH	Agriculture, General Farming and Domestic	250	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
8/37/25/*G/0104	MALTING FARM, ARDLEIGH	Agriculture, General Farming and Domestic	80	C	Whilst the abstraction is located outside of the Order Limits, the project proposals closest to the abstraction include undergrounding. At the current time, the groundwater conditions in the area of the undergrounding are unknown and the requirement for dewatering is also unknown. Whilst the Project proposals are not anticipated to have an impact on this abstraction, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
8/36/18/*G/0064	WELLPOINT AT DEDHAM	Agriculture, Spray Irrigation - Direct	365	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0332	WELLPOINT AT KALM OAK NURSERY	Agriculture, Spray Irrigation - Direct	325	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0254	TUBE WELL, 24 HARWICH RD, ARDLEIGH	Agriculture, General Farming and Domestic	360	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
8/37/25/*G/0329	WELLPOINT AT HARWICH ROAD	Agriculture, Spray Irrigation - Direct	80	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0306	BOREHOLE AT GLEBE COTTAGE	Water Supply, Private Water Supply	20	C	Whilst the abstraction is located outside of the Order Limits, the project proposals closest to the abstraction include undergrounding of third party infrastructure approximately 25 m from the abstraction. At the current time, the groundwater conditions in the area of the undergrounding are unknown and the requirement for dewatering is also unknown. Whilst the Project proposals are not anticipated to have an impact on this abstraction, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
8/37/25/*G/0334	WELLPOINT AT LAWFORD	Agriculture, Spray Irrigation - Direct	100	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0065	GODS HOUSE FARM, ARDLEIGH	Agriculture, General Farming and Domestic	500	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
8/37/25/*G/0029	PYGHTLE POULTRY FARM, ARDLEIGH	Agriculture, General Farming and Domestic	140	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0318	WELL, “3” - WICK FARM ARDLEIGH	Agriculture, General Farming and Domestic	280	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0318	WELL, “2” - WICK FARM ARDLEIGH	Agriculture, General Farming and Domestic	190	C	
8/37/25/*G/0318	WELL, “1” - WICK FARM ARDLEIGH	Agriculture, General Farming and Domestic	150	C	
8/37/25/*G/0317	WELL AT BLOOMFIELD FRM, ARDLEGH	Agriculture, General Farming and Domestic	55	C	Whilst the abstraction is located outside of the Order Limits, the Project proposals include undergrounding works approximately 60m from the abstraction. However, due to the anticipated ground and groundwater conditions the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0038	HARTS LANE, ARDLEIGH. (A)	Agriculture, General	410	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
		Farming and Domestic			not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0038	HARTS LANE, ARDLEIGH. (B)	Agriculture, General Farming and Domestic	220	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/25/*G/0190	BIRCHWOOD NURSERY, ARDLEIGH	General Agriculture, Spray Irrigation - Direct	230	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/36/18/*G/0025	STRAIGHT ROAD, BOXTED	Agriculture, Spray Irrigation - Direct	10	D	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
8/36/18/*G/0062	WELL AT REDHOUSE FARM, BOXTED	Agriculture, General Farming and Domestic	20	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/23/*G/0066	LODGE FARM, GT. HORKEELEY	Agriculture, General Farming and Domestic	100	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
					quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/36/15/*G/0009	SPRING FARM, GT. HORKESLEY	Agriculture, General Farming and Domestic	125	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/36/15/*G/0009	SPRING FARM, GT. HORKESLEY	Agriculture, General Farming and Domestic	250	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/24/*G/0017	CLAYPIT BRICKWORKS, MARKS TEY	Industrial, Commercial and Public Services	370	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/24/*G/0041	TEY BROOK FARM, GREAT TEY	Agriculture, General Farming and Domestic	100	D	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/32/*G/0038	WELL AT WHITEHEADS FARM	Agriculture, General Farming and Domestic	45	E	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
8/37/32/*G/0015	WELL, HOLE FARM, FAULKBOURNE	Agriculture, General Farming and Domestic	30	E	Whilst the abstraction is located outside of the Order Limits, the Project proposals include undergrounding works approximately 50 m from the abstraction. However, due to the anticipated ground and groundwater conditions the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/32/*G/0011	BOREHOLE AT FAULKBOURNE	Agriculture, General Farming and Domestic	210	E	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/35/*G/0035	STACEYS FARM, BROOMFIELD	Agriculture, General Farming and Domestic	350	F	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/35/*G/0034	SCRAVELS, BROOMFIELD	Agriculture, General Farming and Domestic	65	F	The abstraction is located close to the Order Limits and the Project proposals include use of an existing access track in close proximity to the abstraction. The Project proposals are not anticipated to have an impact on groundwater quality, levels or flow and therefore impacts on this abstraction are considered unlikely.
8/37/34/*G/0018	BRETTONS, CHIGNALL ST. JAMES	Agriculture, General	115	F	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater

Licence Number	Point Name	Purpose and Use	Distance from Order Limits (m)	Project Section	Assessment
		Farming and Domestic			quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/33/*G/0007	MONTPELIER FARM, WRITTLE	Agriculture, General Farming and Domestic	300	F	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/33/*G/0003	PARK LODGE, MARGARETTING	Water Supply, Private Water Supply	200	F	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/33/*G/0011	CANTERBURYS, MARGARETTING	Agriculture, General Farming and Domestic	260	G	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
8/37/56/*G/0033	LARKINS FARM, ORSETT	Agriculture, General Farming and Domestic	340	H	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.

Annex B: Private Water Supplies

Table A9.3.12 South Norfolk private water supplies within Study Area

Point Reference	Distance from Order Limits (m)	Assessment
1	350	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 365 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
2	15	Whilst the abstraction is outside of the Order Limits, the closest Project proposals include undergrounding within 25 m. The Project proposals are not anticipated to have an impact on this abstraction, however, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
3	120	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
4	455	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
5	160	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.

Point Reference	Distance from Order Limits (m)	Assessment
6	415	The closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 420 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
7	85	The closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 130 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
8	25	The closest Project works to the abstraction comprise the use of existing access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.

Table A9.3.13 Babergh and Mid Suffolk District Council private water supplies within Study Area

Point Name	Distance from Order Limits (m)	Project Section	Assessment
Swattesfield Campsite Gislingham Road Thornham	190	B	The closest Project works to the abstraction comprise the use of existing access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Eastlands Farm, Eastlands Lane, Finningham Stow	265	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line approximately 370 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.

Point Name	Distance from Order Limits (m)	Project Section	Assessment
Boundary Farm Cotton Road Mendlesham IP14 5SR	215	B	The closest Project works to the abstraction comprise the use of existing access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Long Meadow, Golly Road, Willisham	190	B	The closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 220 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Caley Green Farm, Hadleigh Road, Somersham	20	B	The closest Project works to the abstraction comprise the use of existing access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Grove Farm High Street Flowton Suffolk	355	B	The closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 380 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Agri Hire, Fidgeons Lane, Bullen Lane, Bramford	170	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Thornbush Hall Thornbush Lane Bramford	20	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any

Point Name	Distance from Order Limits (m)	Project Section	Assessment
			impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Rotormotive, Hill Farm Burstall Lane, Sproughton	160	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line approximately 250 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Abbey Oaks Burstall Lane Sproughton	400	C	The closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 450 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
The Firs Church Lane Washbrook IP8 3HG	220	C	The closest Project works to these abstractions comprise the undergrounding of third-party infrastructure located approximately 340 m from the abstractions. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstractions are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
The Lindens Church Lane Washbrook IP8 3HG	210	C	
The Croft Church Lane Washbrook	330	C	
Headlands Church Lane Washbrook IP8 3HF	315	C	
Wenham Grange, Bottle Bridge	105	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any

Point Name	Distance from Order Limits (m)	Project Section	Assessment
Road, Wenham Parva			impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Bobbits Hall, Holtonwood Road, Stratford St Mary	160	C	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 265 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Wheatlands Holtonwood Road Stratford St Mary	230	C	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 530 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Glebe House School Lane Stratford St Mary	400	C	The closest Project works to this abstraction comprise the trenchless crossing of Higham Road, and associated launch/reception pits located approximately 650 m from the abstraction. The trenchless crossing assessment in Section 9.4 above, indicates that groundwater is unlikely to be intercepted by the launch/reception pits of this trenchless crossing closest to the abstraction. The Project proposals closest to the abstraction are therefore not anticipated to have any impacts on groundwater quality, levels or flow at this location and impacts on the PWS are considered to be unlikely.

Table A9.3.14 Tendring District Council private water supplies within the Study Area

Point Name	Distance from Order Limits (m)	Project Section	Assessment
Malting Farm	50	C	Whilst the abstraction is outside of the Order Limits, the closest Project proposals include undergrounding within 125m. The Project proposals are not anticipated to have an impact on this abstraction, however, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
Oatlands	435	C	The nearest works comprise the location of a temporary construction compound, with the nearest intrusive works located approximately 510 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Mulberry Lodge	130	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Jennings Farm House	120	C	
The Coach House	265	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Little Bromley Hall	235	C	
Barlon House	300	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
The Old Rectory	280	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the

Point Name	Distance from Order Limits (m)	Project Section	Assessment
			groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
2 New Memorial	35	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
3 New Memorial	35	C	
1 Church Road	10	C	
Woodside	325	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
The Haven	15	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
The Haywain	50	C	The closest Project works to the abstraction comprise the use of existing access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Mulleys Cottage	15	C	
Mulleys Farm	25	C	
Grove Cottage	85	C	The closest Project works to the abstraction comprise the use of existing access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in

Point Name	Distance from Order Limits (m)	Project Section	Assessment
			this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Oakwood	30	C	The closest Project works to the abstraction comprise the use of existing access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Orchard Cottage	10	C	
Fen Cottage	220	C	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 325 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Friesian Bungalow	20	C	Whilst the abstraction is outside of the Order Limits, the closest Project proposals include undergrounding of third party infrastructure within 25 m. The Project proposals are not anticipated to have an impact on this abstraction, however, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
2 Wick Cottage	20	C	
1 Wick Cottages	20	C	

Table A9.3.15 Colchester City Council private water supplies within the Study Area

Point Name	Description	Distance from Order Limits (m)	Project Section	Assessment
Jody Cottage, Nightangle Hill, Langham, Colchester, CO4 5PN	Category 1, E Private water supply. Well source shared with Nightingale farm	190	C	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 330 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Nightingale Farm, Nightingale Hill, Langham, Colchester, C04 5PN	Category 1, E Private water supply. Well supply shared with the bungalow next door	180	C	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 330 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
WoodLodge, Queens Head Road, Boxted, Colchester, CO4 5RQ	Category 1, F Private water supply. well near house	370	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line approximately 250 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Oakwood, Queens Head Road, Boxted, Colchester,CO4 5RH	Category 1, F Private water supply. Shallow well at rear of the property	295	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works being approximately 450 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Rose cottage, Redhouse Lane, Boxted Colchester,	Category 1, F Private water supply. Shallow well	135	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works being approximately 300 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality,

Point Name	Description	Distance from Order Limits (m)	Project Section	Assessment
Colchester, CO4 5RL				levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Redhouse Farm, Redhouse lane, Boxted, Colchester, CO4 5RL	Category 1, F Private water supply. Well source new one dug 1998 due to sufficiency problems	90	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works being approximately 220 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Harrow wood, Queens Head road, Boxted, Colchester, CO4 5RH	Category 1, F Private water supply. Shallow well at rear of the property	255	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works being approximately 400 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Orchard House, Boxted Road, Great Horkesley, Colchester, CO6 4AP	Category 1, F Private water supply. Well in rear garden	40	D	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
New Hofield Farm, Queens Head Road, Boxted, Colchester, CO4 5RJ	Category 1,F Private water supply.Well Located at rear garden, Pumped to Property and distribution from roofspace tank	470	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works being approximately 780 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.

Point Name	Description	Distance from Order Limits (m)	Project Section	Assessment
Tye cottage, Holly Lane, Great Horkesley, Colchester, CO6 4AW	Category 1, F Private water supply. Well source located beneath floor of kitchen	95	D	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Green View, Holly Lane, Great Horkesley, Colchester, CO6 4AW	Category 2, 5 Private water supply. Well source Located near rear of house	190	D	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
The croft, Great Horkesley, Colchester, CO6 4AP	Category 1, F Private water supply. Well source located in rear garden	130	D	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 230 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Baygreen Farmhouse, Workhouse Road, Little Horkesley, CO6 4DS	Category 1, F Private water supply. Well source	25	D	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 125 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Vinesse Road, Little Horkesley, Colchester, CO6 4DT	Category 1, F Private water supply. Well source new one dug 1998 due to	15	D	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater

Point Name	Description	Distance from Order Limits (m)	Project Section	Assessment
	sufficiency problems			quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Workhouse Cottage, Workhouse road, Little Horkesley, Colchester, CO6 4DR	Category 1, F Private water supply. Well source Deepened in 1992 due to sufficiency problems	175	D	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Chancers House, Fossetts Lane, Fordham, Colchester, CO63NY	Category 1, F Private water supply. Well Source installed approx. 20 years ago	140	D	The closest Project works to this abstraction comprise the undergrounding of infrastructure located approximately 155 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.
Gate House, Rectory Road, Aldham, Colchester, CO6 3RR	Category 1, F Private water supply. Well Located at rear garden, Pumped to Property and distribution from roof space tank	10	D	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.

Table A9.3.16 Braintree District Council private water supplies within the Study Area

Point Name	Distance from Order Limits (m)	Project Section	Assessment
Newneys Farm	40	E	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.

Table A9.3.17 Chelmsford District Council private water supplies within the Study Area

Point Name	Distance from Order Limits (m)	Project Section	Assessment
Halfway House, Highwood Road, Writtle, CM1 3PS	10	F	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works being approximately 160 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the PWS are considered to be unlikely.

Annex C: BGS Water Well Data

Table A9.3.18 BGS water well data within the Order Limits

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM14SW55/BJ	LONGACRE CHERRY LANE	CHALK GROUP	0	C	The abstraction is located within the Order Limits however the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 50 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ68SE34/BJ	BROOK FARM	CHALK GROUP	0	H	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Table A9.3.19 BGS water well data within the Study Area

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TG20SW65/BJ	DUNSTON MANOR STOKE HOLY CROSS	CHALK GROUP	405	A	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
TG20SW45/BJ	VALE HOSPITAL SWAINSTHORPE	CHALK GROUP	35	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 45 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TG20SW47/BJ	VIOLET BANK SWAINSTHORPE	CHALK GROUP	20	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 30 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TG20SW60/BJ	CHURCH FARM SWAINSTHORPE	CHALK GROUP	125	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 130 m from the nearest abstraction. Due to

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TG20SW57/BJ	WOODSIDE MULBARTON	CHALK GROUP	45	A	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TG20SW61/BJ	KENNINGHAM HALL FARM MULBARTON	CHALK GROUP	30	A	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM29NW20/BJ	CHURCH FARM NEWTON FLOTMAN	CHALK GROUP	190	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 525 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM29NW5/BJ	MONKS FARM NEWTON FLOTMAN	CHALK GROUP	140	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 525 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM19NE26/BJ	HILL FARM WETHEL BRACON ASH NORWICH	CHALK GROUP	120	A	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM19NE37/BJ	MR BATTEN'S COTTAGE, WRENINGHAM	UNKNOWN	480	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 550 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM19NE38/BJ	MR DAY'S, WRENINGHAM	UNKNOWN	480	A	
TM19NE39/BJ	MR STANNARD'S, WRENINGHAM	UNKNOWN	480	A	
TM19SW37/BJ	CHESTNUT TREE FARM, FORNCETT ST PETER	CHALK GROUP	125	A	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality,

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM19SE2/BJ	NEAR CHURCH FORNCETT ST PETER (SITE 17 TASS VALLEY SCHEME)	CHALK GROUP	160	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 250 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM19SE3/BJ	NEAR CHURCH FORNCETT ST PETER	SUPERFICIAL DEPOSITS	220	A	
TM19SE1/BJ	NEAR CHURCH FORNCETT ST PETER (SITE 17 TASS VALLEY SCHEME)	CHALK GROUP	225	A	
TM19SE12/BJ	FORNCETT ST PETER	CHALK GROUP	440	A	
TM19SW39/BJ	HALL FARM, BUNWELL	UNKNOWN	150	A	The closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 170 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM19SW41/BJ	FEN LAKE FISHERY CARLETON RODE	CHALK GROUP	280	A	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM19SW24/BJ	BRICKKILN LANE	SUPERFICIAL DEPOSITS	15	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 250 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW27/BJ	DOVE HOUSE FARM, TIBENHAM	CHALK GROUP	445	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 480 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW20/BJ	WHITE HOUSE FARM	CHALK GROUP	30	A	The closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 35 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW19/BJ	LONG ROW FARM	CHALK GROUP	250	A	The closest Project works to the abstraction comprise a temporary construction compound. Significant intrusive works are unlikely to be required and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW30/BJ	LONG ROW FARM, TIBENHAM	UNKNOWN	230	A	
TM18NW29/BJ	LONG ROW FARM, TIBENHAM	CHALK GROUP	320	A	
TM18NW32/BJ	DYSON'S FARM, TIBENHAM	UNKNOWN	340	A	The closest Project works to the abstraction comprise the use of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW31/BJ	DYSON'S FARM, TIBENHAM	CHALK GROUP	350	A	
TM18NW12/BJ	PARK FARM	CHALK GROUP	420	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 430 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW35/BJ	PARK FARM, WINFARTHING	CHALK GROUP	380	A	
TM18NW9/BJ	NR THE CHURCH	SUPERFICIAL DEPOSITS	490	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					construction of overhead line with the intrusive works located approximately 690 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW18/BJ	WILLOW FARM	CHALK GROUP	260	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 365 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18NW7/BJ	MILL FARM	SUPERFICIAL DEPOSITS	490	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 495 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18SW75/BJ	VINE FARM	SUPERFICIAL DEPOSITS	65	A	The closest Project works to the abstraction comprise the construction of a permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are
TM18SW3/BJ	THE HEYWARD DISS	CHALK GROUP	100	A	

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM18SW1/BJ	THE HEYWARD DISS	CHALK GROUP	160	A	not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18SW2/BJ	BACK HEYWOOD ROAD	CHALK GROUP	120	A	
TM18SW5/BJ	HILL COTTAGES	SUPERFICIAL DEPOSITS	30	A	The closest Project works to the abstraction comprise the construction of a permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18SW13/BJ	JARRETS FARM	SUPERFICIAL DEPOSITS	220	A	The closest Project works to the abstraction comprise the construction of a permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18SW17/B/BJ	WESTBROOK GREEN FARM B	SUPERFICIAL DEPOSITS	390	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 385 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM18SW17/A/BJ	WESTBROOK GREEN FARM A	SUPERFICIAL DEPOSITS	375	A	

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM08SE50/BJ	THE COMMON, BRESSINGHAM	UNKNOWN	490	A	The closest Project works to the abstraction comprise the construction of a permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM08SE7/BJ	FURTHER FEN FARM	CHALK GROUP	265	A	The closest Project works to the abstraction comprise the construction of a permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM08SE52/BJ	ROYDON HALL COTTAGE	UNKNOWN	485	A	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 365 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM08SE5/BJ	ROYDON HALL	CHALK GROUP	220	A	
TM08SE51/BJ	THE HART, ROYDON	UNKNOWN	250	A	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality,

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM08SE30/BJ	ROYDON RECTORY	SUPERFICIAL DEPOSITS	155	A	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
OAK FARM, LYNG ROAD, PALGRAVE	OAK FARM, LYNG ROAD, PALGRAVE	CHALK GROUP	140	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 380 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM17NW25/BJ	PALGRAVE ROAD	CHALK GROUP	300	B	The closest works require the modification of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM17NW4/BJ	PALGRAVE	NO AQUIFER	90	B	
TM07NE19/BJ	ST JOHNS PALGRAVE	CHALK GROUP	80	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 95 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM17NW16/BJ	GRANGE FARM	CHALK GROUP	125	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 230 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM17NW171/BJ	MARSH FARM, THRANDESTON	CHALK GROUP	70	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 30 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely
TM17NW6/BJ	LITTLE GREEN	CHALK GROUP	370	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 375 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality,

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM07SE6/BJ	WHITE HOUSE FARM MELLIS	CHALK GROUP	390	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 400 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM07SE29/BJ	HARTISMERE PUBLIC WELL THE GREEN MELLIS	SUPERFICIAL DEPOSITS	420	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 400 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM07SE31/BJ	WAVENEY LODGE BURGATE	CHALK GROUP	165	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM07NE4/BJ	WILLOW COTTAGE BURGATE	CHALK GROUP	275	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM07SE12/BJ	STAR HOUSE FARM THORNHAM MAGNA	CHALK GROUP	180	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 190 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM06NE9/BJ	SURWOOD FARM WICKHAM SKEITH	CHALK GROUP	220	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 425 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM06NE17/B/BJ	MENDLESHAM HALL FARM MENDLESHAM	CHALK GROUP	410	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 500 m from the abstraction. The

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM06NE17/A/BJ	MENDLESHAM HALL FARM MENDLESHAM	CHALK GROUP	405	B	Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM06SE11/BJ	WIMBLE FARM MENDLESHAM	CHALK GROUP	85	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 90 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM06SE7/BJ	HILL FARM GIPPING	CHALK GROUP	75	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 100 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM06SE5/BJ	PUBLIC WELL MIDDLEWOOD GREEN	CHALK GROUP	480	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 585 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					therefore impacts on the abstraction are considered to be unlikely.
TM05NE207/BJ	BELLS CROSS EARL STONHAM	CHALK GROUP	250	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 190 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05NE265/BJ	BELLS CROSS EARL STONHAM	CHALK GROUP	50	B	
TM05NE173/BJ	DOVESHILL FARM	CHALK GROUP	105	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE54/BJ	REEDHAM MARKET NO 14	UNKNOWN	90	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE17/BJ	THE RECTORY BARKING	CHALK GROUP	380	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 420 m from the nearest abstraction. Due to

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE59/BJ	VALLEY FARM, BATTISFORD	UNKNOWN	475	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE16/BJ	GIPPING RDC COUNCIL HOUSES	CHALK GROUP	460	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE13/BJ	TOP FARM BARKING TYE	CHALK GROUP	30	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE14/BJ	LOWER GREEN FARM	CHALK GROUP	20	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE15/BJ	MOAT FARM	CHALK GROUP	10	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 50 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE55/BJ	PUBLIC WELL, BARKING TYE	CHALK GROUP	365	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 370 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM05SE1/BJ	CP SCHOOL RINGSHALL	CHALK GROUP	160	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 170 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE8/BJ	POPLARS FARM OFFTON	CHALK GROUP	420	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 540 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE2/BJ	GIPPING R.D.C. 9 MIDDLEWOOD COTTAGES	CHALK GROUP	180	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 90 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE1/BJ	GIPPING R.D.C. 5 MIDDLEWOOD COTTAGES	CHALK GROUP	240	B	
TM04NE4/BJ	GIPPING R.D.C. COUNCIL HOUSES	CHALK GROUP	220	B	
TM04NE3/BJ	THE VICARAGE OFFTON	CHALK GROUP	80	B	
TM04NE64/BJ	WELL FARM, OFFTON	CHALK GROUP	150	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 160 m from the abstraction. Due to the

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE63/BJ	OFFTON CASTLE FARM	CHALK GROUP	170	B	The closest works require the removal of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE20/BJ	OLD CHAPEL HOUSE OFFTON	CHALK GROUP	100	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 110 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE23/BJ	HIGH HOUSE OFFTON	CHALK GROUP	155	B	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE21/BJ	PLACE FARM OFFTON	CHALK GROUP	220	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					undergrounding of third-party infrastructure located approximately 240 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE26/BJ	GROVE FARM SOMERSHAM	CHALK GROUP	105	B	The closest works require the removal of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE40/BJ	BLEAK HALL FARM SOMERSHAM	CHALK GROUP	15	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 20 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE43/BJ	VALLEY FARM FLOWTON	CHALK GROUP	240	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 250 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality,

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE45/BJ	COUNCIL HOUSES CHURCH ARCH FLOWTON	CHALK GROUP	475	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 480 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04NE29/BJ	TYE HOUSE BRAMFORD	CHALK GROUP	410	B	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 450 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14NW157/BJ	BULLEN HALL FARM	CHALK GROUP	250	B	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14NW158/BJ	BULLEN FARM	CHALK GROUP	15	B	

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM04NE48/BJ	CANES FARM BURSTALL	CHALK GROUP	435	B	The closest Project works to the abstraction comprise the construction of permanent and temporary drainage basins. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04SE35/BJ	WALNUT TREE FARM, BURSTALL	CHALK GROUP	285	C	The closest Project works to the abstraction comprise the construction of permanent and temporary drainage basins. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14SW403/BJ	THE FIRS FARM, SPROUGHTON	UNKNOWN	310	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 330 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14SW421/BJ	ABBY OAKS, SPROUGHTON	UNKNOWN	315	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					approximately 330 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14SW426/BJ	BURSTALL LANE, SPROUGHTON	UNKNOWN	30	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 200 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14SE52/BJ	BERRISHILL BURSTALL	CHALK GROUP	465	C	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04SE39/BJ	KILN COTTAGE, HINTLESHAM	CHALK GROUP	425	C	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					therefore impacts on the abstraction are considered to be unlikely.
TM14SW53/BJ	FEN FARM HADLEIGH ROAD	SUPERFICIAL DEPOSITS	30	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 135 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14SW43/BJ	HERMITAGE FARM SPROUGHTON	CHALK GROUP	115	C	The closest works require the removal of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14SW76/BJ	BELSTEAD BROOK WASHBROOK	CHALK GROUP	75	C	The closest works require the removal of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM14SW71/BJ	COLES GREEN FARM	CHALK GROUP	135	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM14SW70/BJ	ORCHARD COTTAGE	CHALK GROUP	220	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04SE31/BJ	ROOKERY FARM, WASHBROOK	UNKNOWN	80	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04SE9/BJ	WENHAM GRANGE WENHAM	CHALK GROUP	290	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM04SE7/BJ	VAUXHALL FARM GREAT WENHAM	CHALK GROUP	40	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM04SE6/BJ	HADLEIGH FARM HADLEIGH	SUPERFICIAL DEPOSITS	455	C	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM03NE7/BJ	RAYDON	CHALK GROUP	295	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 310 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM03NW44/BJ	SNOW DOWN, LOWER RAYDON	CRAG GROUP	225	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 300 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM03NE40/BJ	THE OLD RECTORY, HOLTON	CRAG GROUP	150	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					approximately 310 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM03NW25/BJ	TENDRING HUNDRED HIGHAM	CHALK GROUP	465	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 675 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM03SE61/BJ	11 COGGESHALL ROAD, ARDLEIGH	KESGRAVE CATCHMENT SUBGROUP	395	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 525 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE103/BJ	ABBOTT`S COTTAGE, ARDLEIGH	CHALK GROUP	130	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 675 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE186/BJ	MILL HOUSE (PHOENIX MILL) ARDLEIGH	KESGRAVE CATCHMENT SUBGROUP	495	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 460 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE166/BJ	E. ABBOTT and SONS, ARDLEIGH	UNKNOWN	455	C	
TM02NE167/BJ	E. ABBOTT and SONS, ARDLEIGH	UNKNOWN	465	C	
TM02NE191/BJ	HOLLYTREE NURSERIES, ARDLEIGH	SUPERFICIAL DEPOSITS	210	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
TM02NE187/BJ	BADLISS HALL, ARDLEIGH	UNKNOWN	415	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 600 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

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TM02NE192/BJ	MORROW LANE FARM, ARDLEIGH	UNKNOWN	175	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 335 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE148/BJ	VINCES FARM ARDLEIGH	UNKNOWN	420	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 430 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE152/BJ	TROWEL AND HAMMER ARDLEIGH	UNKNOWN	435	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 440 m from the abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE151/BJ	WATERHOUSE FARM, ARDLEIGH	UNKNOWN	320	C	The closest Project works to the abstraction comprise the construction of permanent drainage basin and associated

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					outfall. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE104/BJ	WORMSEY WOOD FARM, LAWFORD	CHALK GROUP	230	C	The abstraction is not located within the Order Limits and the Project proposals closest to the borehole are not anticipated to have any impacts on groundwater quality, levels or flow and therefore impacts on the abstraction borehole are considered to be unlikely.
TM02NE174/BJ	CATTSGREEN FARM, LITTLE BROMLEY	SUPERFICIAL DEPOSITS	25	C	The closest Project works to the abstraction comprise the construction of permanent drainage basin and associated outfall. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NE175/BJ	CATTSGREEN FARM, LITTLE BROMLEY	SUPERFICIAL DEPOSITS	10	C	
TM12NW11/BJ	BRAHAM HALL LITTLE BROMLEY	CHALK GROUP	265	C	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM02NE173/BJ	MERCHANTS COTTAGES, ARDLEIGH	UNKNOWN	390	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 450 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NW239/BJ	ARDLEIGH BREAK TANK	CHALK GROUP	195	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 300 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikelyto have an impact on this borehole supply.
TM02NW243/BJ	PYGHTLE POULTRY FARM, ARDLEIGH	UNKNOWN	320	C	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 420 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NW257/BJ	FOUNTAINS FARM, ARDLEIGH	UNKNOWN	20	C	Whilst the abstraction is outside of the Order Limits, the closest Project proposals include undergrounding of third party infrastructure within 50 m. The Project proposals are not anticipated to have an impact on this abstraction,

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TM02NW258/BJ	FOUNTAINS FARM, ARDLEIGH	UNKNOWN	200	C	however, further investigation and assessment should be undertaken following detailed design to identify the potential for any impacts not anticipated in this assessment and to define and agree any mitigation that may be required.
TM02NW252/BJ	HOLLYTREES POULTRY FARM, WICK LANE, ARDLEIGH	UNKNOWN	50	C	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NW141/BJ	CROWN INN ARDLEIGH	SUPERFICIAL DEPOSITS	460	C	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TM02NW222/BJ	ST MONICA IPSWICH ROAD, ARDLEIGH	UNKNOWN	170	D	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TL93SE39/BJ	GREAT HORKESLEY	CHALK GROUP	420	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 580 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL93SE44/BJ	WESTWOOD HOUSE (IN GARDEN), LITTLE HORKESLEY	SUPERFICIAL DEPOSITS	305	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 380 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL93SE43/BJ	WESTWOOD HOUSE (IN GARAGE), LITTLE HORKESLEY	SUPERFICIAL DEPOSITS	350	D	
TL93SE11/BJ	WESTWOOD HOUSE LITTLE HORKESLEY	CHALK GROUP	350	D	
TL92NE120/BJ	PARK FARM LITTLE HORKESLEY	SUPERFICIAL DEPOSITS	490	D	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of the Project infrastructure located approximately 610 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TL92NW34/BJ	HILL FARM, GALLOWS GREEN ALDHAM	CHALK GROUP	20	D	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL81NW69/BJ	FELIX HALL, KELVEDON	SUPERFICIAL DEPOSITS	295	E	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 440 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL81NW121/BJ	121/BJ PORTERS FARM HOLLOW ROAD KELVEDON	UNKNOWN	40	E	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 130 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL81NW68/BJ	PORTERS FARM, KELVEDON	SUPERFICIAL DEPOSITS	40	E	
TL81NW110/BJ	ARC SILVER END	SUPERFICIAL DEPOSITS	370	E	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL71NE35/BJ	TROYS HALL FAIRSTEAD	UNKNOWN	350	E	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL71NE37/BJ	FAIRSTEAD BLIXE`S FARM W/D NO. 241/90	UNKNOWN	200	E	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL71NW29/BJ	HIGH HALL, FAIRSTEAD	UNKNOWN	80	E	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL71NW27/BJ	THE LODGE FARM, FAIRSTEAD	UNKNOWN	200	E	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the

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					construction of overhead line with the intrusive works located approximately 320 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL71NW26/BJ	WINDMILL PUBLIC HOUSE, LITTLE WALTHAM	SUPERFICIAL DEPOSITS	210	F	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL71SW49/BJ	LITTLE STONAGE FARM, LITTLE WALTHAM	UNKNOWN	135	F	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL71SW151/BJ	BROOKLANDS, SHEEPCOTE LANE, LITTLE WALTHAM	UNKNOWN	430	F	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 550 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TL61SE1/BJ	THE WALNUT TREE BROADS GREEN	SUPERFICIAL DEPOSITS	270	F	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 400 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60NE5/BJ	BROOMWOOD, CHIGNALL WATER DEPT	SUPERFICIAL DEPOSITS	375	F	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 520 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60NW7/BJ	LITTLE MOOR HALL ROXWELL	SUPERFICIAL DEPOSITS	355	F	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60NE74/BJ	THE CAUSEWAY WRITTLE	UNKNOWN	25	F	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality,

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60NE75/BJ	CHEQUERS LANE WRITTLE	SUPERFICIAL DEPOSITS	440	F	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60NE73/BJ	CHEQUERS LANE WRITTLE	UNKNOWN	500	F	
TL60SE82/BJ	BUMPSTEADS FARM, WRITTLE, WATER DEPT	UNKNOWN	50	F	The closest Project works to the abstraction comprise the construction of permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60SE109/BJ	COPTFOLD HALL	UNKNOWN	260	F	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the undergrounding of third-party infrastructure located approximately 270 m from the nearest abstraction. Due to the anticipated ground and groundwater conditions the Project proposals closest to the abstraction are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60SE40/BJ	IVY HILL, MARGARETTING WATER DEPT	SUPERFICIAL DEPOSITS	105	F	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely

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					to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60SE38/BJ	EWELAND HALL, MARGARETTING WATER DEPT	WOOLWICH FORMATION	410	F	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TL60SE39/BJ	MARGARETTING WATER DEPT	UNKNOWN	470	F	The closest Project works to the abstraction comprise the utilisation of existing permanent access tracks. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ69NE25/BJ	LITTLE BLUNTS FM	LAMBETH GROUP	485	G	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 620 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					therefore impacts on the abstraction are considered to be unlikely.
TQ68NE852/BJ	FRIERN MANOR	CHALK GROUP	110	G	The closest works require the removal of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ68SE35/BJ	STANFORD LE HOPE	CHALK GROUP	285	H	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 370 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ68SE341/BJ	RAINBOW LANE, STANFORD-LE-HOPE	CHALK GROUP	450	H	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 640 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ68SE261/BJ	MUCKING 5	NO AQUIFER	190	H	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 270 m from the nearest abstraction.
TQ68SE263/BJ	MUCKING 7	NO AQUIFER	175	H	

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
TQ68SE260/BJ	MUCKING 4	NO AQUIFER	165	H	The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ68SE262/BJ	MUCKING 6	NO AQUIFER	385	H	
TQ68SE314/BJ	BUCKINGHAM HILL, LINDFORD	CHALK GROUP	30	H	The abstraction is not within the Order Limits and the closest Project works to this abstraction comprise the construction of overhead line with the intrusive works located approximately 85 m from the abstraction. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ67NE235/BJ	DUROX BUILDING BLOCKS LTD	CHALK GROUP	335	H	The closest works require the modification of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ67NE33/A/BJ	NORTHUMBERLAND ROAD LINDFORD 1	THANET SAND FORMATION	150	H	The closest Project works to the abstraction comprise the construction of permanent drainage basins and associated outfall. The intrusive works required are relatively shallow and unlikely to interact with the groundwater in this area. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ67NE33/B/BJ	NORTHUMBERLAND ROAD LINDFORD 2	CHALK GROUP	150	H	
TQ68SW117/BJ	BAKER STREET	CHALK GROUP	80	H	The closest works require the modification of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at

Registration Number	Point Name	Aquifer	Distance from Order Limits (m)	Project Section	Assessment
					this location and therefore impacts on the abstraction are considered to be unlikely.
TQ67NE228/BJ	WIMPEY M5	UNKNOWN	390	H	The closest works require the modification of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ67NE24/BJ	MR COLES COTTAGES LOW STREET W TILBURY	CHALK GROUP	210	H	The closest works require the modification of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.
TQ67NE26/BJ	B R LOW STREET STATION W TILBURY	CHALK GROUP	460	H	The closest works require the modification of existing overhead line. The Project proposals are not anticipated to have any impacts on groundwater quality, levels or flow at this location and therefore impacts on the abstraction are considered to be unlikely.

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