Cambridge Waste Water Treatment Plant Relocation Project
Anglian Water Services Limited

Appendix 14.5: Mineral Safeguarding Area Calculation

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1 Sand and Gravel MSA calculation

Table 1-1: Calculation of impact on Sand and Gravel MSA

Section of the Proposed Development where construction intersects with the MSA	Location of MSA	Description of the Proposed Development	Area of affected MSA within the Proposed Development boundary (m^2)	Length of affected area (m)	Data from ground investigation
Northern section of Waterbeach pipeline	North of Horningsea	Where the River and railway crossings are located this will be in a tunnel located beneath the MSA (River Terrace Deposits). The areas between the crossings will be open cut trenching to lay pipeline at average depth of 2-5m bgl.	115,350	3845	River Terrace Deposits were encountered at thicknesses between 1m and 1.4m during ground investigation
Southern section of Waterbeach pipeline	South of Horningsea		79,140	2638	
Transfer tunnel between existing and proposed WWTP	West of proposed WWTP, south of A14	Transfer pipeline will be in a tunnel 10 - 25m deep and therefore will be located beneath the MSA (River Terrace Deposits). Therefore this area relates to 3 shaft sites only.	5700	-	River Terrace Deposits encountered in one borehole only during GI at 1.2m bgl.
Outfall pipeline to the River Cam	West of proposed WWTP, north of A14	Open cut trenching 2-5m bgl.	24720	824	River Terrace Deposits encountered in one borehole only

Section of the Proposed Development where construction intersects with the MSA	Location of MSA	Description of the Proposed Development	Area of affected MSA within the Proposed Development boundary (m^2)	Length of affected area (m)	Data from ground investigation
					(BH_FE_001, adjacent to the River Cam) between 0.3m bgl and 3.9m bgl.
Total area affected (m^2)					**224,910**
Total sand and gravel MSA area (m^2)					**991,760,000**
Percentage of MSA impacted by the development					**0.02%**

** Based on a 30m working area along the pipeline routes*
**Measurements taken from Moata*

2 Chalk MSA calculation

Table 2-1: Calculation of impact on Chalk MSA

Section of the Proposed Development where construction intersects with the MSA	Location of MSA	Description of the Proposed Development	Area of affected MSA within the Proposed Development boundary (m^2)	Length of affected area (m)	Data from ground investigation
Northern section of Waterbeach pipeline	North of Horningsea	Where the River and railway crossings are located this will be in a tunnel located beneath the MSA (Chalk). The areas between the crossings will be open cut trenching to lay pipeline at average depth of 2-5m bgl.	86,280	2876	Chalk was encountered at ~2m bgl, the Gault Formation was encountered at 4.5m bgl.
Southern section of Waterbeach pipeline	South of Horningsea		79,650	2655	
Proposed WWTP	Covers entire area	Proposed WWTP. The area calculated covers the entire proposed WWTP, however this is a worst case as the chalk will only be impacted beneath the footprint of structures.	970,000		Chalk encountered between 7m and 13m thick from between 0.3 and 2m bgl.
Transfer tunnel between existing and proposed WWTP	West of proposed WWTP, south of A14	Transfer pipeline will be in a tunnel 10 - 25m deep and therefore will be located beneath the MSA (Chalk). Therefore this area relates to 3 shaft sites only.	5700	-	Chalk was encountered in limited locations between 2.8 and 8.8m thick.

Section of the Proposed Development where construction intersects with the MSA	Location of MSA	Description of the Proposed Development	Area of affected MSA within the Proposed Development boundary (m^2)	Length of affected area (m)	Data from ground investigation
Outfall pipeline to the River Cam	West of proposed WWTP, north of A14	Open cut trenching 2-5m bgl.	24720	824	Chalk encountered at depths between 1.2m and 6.5m bgl.
Total area affected (m^2)					**1,166,350**
Total Chalk MSA area (m^2)					**636,470,000**
Percentage of MSA impacted by the development					**0.18%**

Get in touch

You can contact us by:

Emailing at **info@cwwtpr.com**

Calling our Freephone information line on **0808 196 1661**

Writing to us at **Freepost: CWWTPR**

Visiting our website at [redacted]

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