

# Yorkshire GREEN Project

Environmental Impact Assessment

Volume three: Preliminary Environmental  
Information Report Appendix 10D  
Hydrogeology Water Framework Directive  
(WFD) Assessment  
October 2021

nationalgrid

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# 1. Hydrogeological Setting

# 1. Hydrogeological Setting

1.1.1 The hydrogeology within the three Focus Areas described in **Chapter 10: Geology & Hydrogeology** is summarised in **Table 10D.1**

**Table 10D.1 - Hydrogeology at the three Focus Areas**

<b>Focus Area<sup>1</sup></b>	<b>Superficial Aquifer</b>	<b>Bedrock Aquifer</b>	<b>Other Designations</b>
Tadcaster	None present	Principal Aquifer (dolomitic limestone)	Nitrate Vulnerable Zone (NVZ) Source Protection Zone 3 (SPZ3)
Monk Fryston Substation	Secondary undifferentiated Aquifer (Harrogate Till)	Principal Aquifer (dolomitic limestone)	NVZ Not in an SPZ
Overton Area (Overton Substation and Shipton by Beningbrough 2TW/YR Duck Under)	None present <sup>2</sup>	Principal Aquifer (Triassic Rocks – sandstone)	Not in an NVZ Not in an SPZ

1 The extent of the Focus Areas are shown on **Figures 10.5, 10.6 and 10.7** of **Chapter 10: Geology and Hydrogeology**. These are the areas in which the construction of the Project will involve greater ground disturbance than elsewhere. Outside these three Focus Areas, the Project primarily involves modifications to existing pylons and overhead lines (approximately 65% of the Project length consists of this activity), as well as surface works at Osbaldwick Substation (new circuit breaker and isolator).

2 These locations are underlain by superficial deposits of the Alne Glaciolacustrine Formation (laminated clay with silt and subordinate fine-grained sand beds). This is moderately impermeable geology. This geology is expected to extend from ground level to greater than 10m below ground level (bgl) at both the 2TW/YR Duck Under and Overton Substation locations, effectively confining the bedrock aquifer and lowering the aquifer vulnerability.

# 2. Review of the River Basin Management Plan and Catchment

## 2. Review of the River Basin Management Plan and Catchment

- 2.1.1 The Focus Areas are all located within the ‘Humber’ groundwater management catchment.
- 2.1.2 The Tadcaster Focus Area is located within the ‘Wharfe Magnesian Limestone’ operational catchment, and the ‘Wharfe Magnesian Limestone’ groundwater body (ID: GB40401G701100)<sup>1</sup>. This groundwater body is 176.22km<sup>2</sup> in area and has an overall classification of Poor. A summary of the Water Framework Directive (WFD) Status and environmental objectives can be found in **Table 10D.2**.
- 2.1.3 The Monk Fryston Substation Focus Area is located within the ‘Aire & Don Magnesian Limestone’ operational catchment and the ‘Aire & Don Magnesian Limestone’ groundwater body (ID: GB40401G700900)<sup>2</sup>. This groundwater body is 221.77 km<sup>2</sup> in area and has an overall classification of Poor. A summary of the WFD Status and environmental objectives can be found in **Table 10D.3**
- 2.1.4 The Overton Focus Area is located within the ‘SUNO Sherwood Sandstone’ operational catchment and the ‘SUNO Sherwood Sandstone groundwater body’ (ID: GB40401G702100)<sup>3</sup>. This groundwater body is 703.03 km<sup>2</sup> in area and has an overall classification of Poor. A summary the WFD Status and environmental objectives can be found in **Table 10D.4** .
- 2.1.5 A small part of the draft Order Limits falls within the ‘Wharfe & Lower Ouse Sherwood Sandstone’ operational catchment and ‘Wharfe & Lower Ouse Sherwood Sandstone’ groundwater body (ID: GB40401G702400)<sup>4</sup>. This groundwater body is 397.21 km<sup>2</sup> in area and has an overall classification of Poor. This groundwater body will not be assessed at this time as the construction works that fall within this groundwater body boundary will be restricted to modifications to existing pylons. These modifications generally involve painting, vegetation management, steel work repair, overhead line replacement, and near surface concrete repair, so cause minimal/no ground disturbance. However, this will be reviewed prior to submission of the Environmental Statement (ES), once the locations of any pylon foundation strengthening works are known, and the WFD assessment refined if necessary.

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<sup>1</sup> Environment.data.gov.uk. (2021). Wharfe Magnesian Limestone Overview. [online] Available at: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB40401G701100> (Accessed 10 August 2021).

<sup>2</sup> Environment.data.gov.uk. (2021). Aire & Don Magnesian Limestone Overview. [online] Available at: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB40401G700900> (Accessed 10 August 2021).

<sup>3</sup> Environment.data.gov.uk. (2021). SUNO Sherwood Sandstone Overview. [online] Available at: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB40401G702100> (Accessed 10 August 2021).

<sup>4</sup> Environment.data.gov.uk. (2021). Wharfe & Lower Ouse Sherwood Sandstone Overview. [online] Available at: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB40401G702400> (Accessed 12 August 2021).

**Table 10D.2 - WFD Status of Wharfe Magnesian Limestone Groundwater Body**

<b>Classification Element</b>	<b>2013 Cycle</b>	<b>2014 Cycle</b>	<b>2015 Cycle</b>	<b>2016 Cycle</b>	<b>2019 Cycle</b>	<b>Objectives</b>	<b>Reasons</b>
Overall Water body							
Overall Water Body	Poor	Poor	Poor	Poor	Poor	Good by 2027	Disproportionate burdens
Quantitative							
Quantitative Saline Intrusion	Good	Good	Good	Good	Good	Good by 2015	
Quantitative Water Balance	Good	Good	Good	Good	Good	Good by 2015	
Quantitative GWDTEs (Groundwater Dependent Terrestrial Ecosystems) Test	Good	Good	Good	Good	Good	Good by 2015	
Quantitative Dependent Surface Water Body Status	Good	Good	Good	Good	Good	Good by 2015	
Chemical (GW)							
Chemical Drinking Water Protected Area	Good	Good	Good	Good	Poor	Good by 2015	
General Chemical Test	Poor	Poor	Poor	Poor	Good	Good by 2027	Disproportionate Burdens
Chemical GWDTEs Test	Good	Good	Good	Good	Good	Good by 2015	
Chemical Dependent Surface Water Body Status	Good	Good	Good	Good	Good	Good by 2015	
Chemical Saline Intrusion	Good	Good	Good	Good	Good	Good by 2015	

**Table 10D.3 - WFD Status of Aire & Don Magnesian Limestone Groundwater Body**

<b>Classification Element</b>	<b>2013 Cycle</b>	<b>2014 Cycle</b>	<b>2015 Cycle</b>	<b>2016 Cycle</b>	<b>2019 Cycle</b>	<b>Objectives</b>	<b>Reasons</b>
Overall Water body							
Overall Water Body	Poor	Poor	Poor	Poor	Poor	Good by 2027	Disproportionate burdens
Quantitative							
Quantitative Saline Intrusion	Good	Good	Good	Good	Good	Good by 2015	
Quantitative Water Balance	Good	Good	Good	Good	Good	Good by 2015	
Quantitative GWDTEs Test	Good	Good	Good	Good	Good	Good by 2015	
Quantitative Dependent Surface Water Body Status	Good	Good	Good	Good	Good	Good by 2015	
Chemical (GW)							
Chemical Drinking Water Protected Area	Good	Good	Good	Good	Poor	Good by 2015	
General Chemical Test	Poor	Poor	Poor	Poor	Poor	Good by 2027	Disproportionate burdens
Chemical GWDTEs Test	Good	Good	Good	Good	Good	Good by 2015	
Chemical Dependent Surface Water Body Status	Good	Good	Good	Good	Good	Good by 2015	
Chemical Saline Intrusion	Good	Good	Good	Good	Good	Good by 2015	



**Table 10D.4 - WFD Status of SUNO Sherwood Sandstone Groundwater Body**

<b>Classification Element</b>	<b>2013 Cycle</b>	<b>2014 Cycle</b>	<b>2015 Cycle</b>	<b>2016 Cycle</b>	<b>2019 Cycle</b>	<b>Objectives</b>	<b>Reasons</b>
Overall Water body							
Overall Water Body	Poor	Poor	Poor	Poor	Poor	Good by 2027	Disproportionate burdens
Quantitative							
Quantitative Saline Intrusion	Good	Good	Good	Good	Good	Good by 2015	
Quantitative Water Balance	Good	Good	Good	Good	Good	Good by 2015	
Quantitative GWDTEs Test	Good	Good	Good	Good	Good	Good by 2015	
Quantitative Dependent Surface Water Body Status	Good	Good	Good	Good	Good	Good by 2015	
Chemical (GW)							
Chemical Drinking Water Protected Area	Poor	Poor	Poor	Poor	Good	Good by 2027	Disproportionate burdens
General Chemical Test	Good	Good	Good	Good	Good	Good by 2015	
Chemical GWDTEs Test	Good	Good	Good	Good	Good	Good by 2015	
Chemical Dependent Surface Water Body Status	Good	Good	Good	Good	Poor	Good by 2015	
Chemical Saline Intrusion	Good	Good	Good	Good	Good	Good by 2015	

- 2.1.6 The Environment Agency have not reported a list of reasons why the Wharfe Magnesian Limestone groundwater body failed to achieve good WFD status and the reasons for deterioration.
- 2.1.7 The Environment Agency have reported a list of reasons why the Aire and Don Magnesian Limestone groundwater body failed to achieve a good WFD status and the reasons for deterioration, see **Table 10D.5**.

**Table 10D.5 - Reasons why Aire & Don Magnesian groundwater body failed to achieve Good WFD Status**

<b>Year</b>	<b>Classification Element Affected</b>	<b>Activity</b>	<b>Sector</b>
2014	General Chemical Test	Private Sewage Treatment	Not applicable
2014	General Chemical Test	Farm/Site Infrastructure	Agriculture - Livestock
2014	General Chemical Test	Poor pesticide management	Agriculture- Arable
2014	General Chemical Test	Poor nutrient management	Agriculture- Arable

- 2.1.8 The Environment Agency have reported a list of reasons why the SUNO Sherwood Sandstone groundwater body failed to achieve a good WFD status and the reasons for deterioration, see **Table 10D.6**

**Table 10D.6 - Reasons why the SUNO Sherwood Sandstone groundwater body failed to achieve Good WFD Status**

<b>Year</b>	<b>Classification Element Affected</b>	<b>Activity</b>	<b>Sector</b>
2014	Trend Assessment	Poor nutrient management	Agriculture- Arable
2014	Trend Assessment	Poor nutrient management	Agriculture - Livestock
2014	Trend Assessment	Private Sewage Treatment	Not applicable
2014	Trend Assessment	Natural Conditions - other	Not applicable

# 3. Water Framework Directive Screening Assessment

# 3. Water Framework Directive Screening Assessment

## 3.1 Introduction

- 3.1.1 The Environment Agency's 'Water Framework Directive Risk Assessments: How to Assess the Risk of your Activity'<sup>5</sup> provides guidance as to how to undertake a WFD Assessment. The guidance identifies four stages:
- Make sure that the assessment covers the receptors that are protected by WFD.
  - Demonstrate that the activity supports the objectives of the local River Basin Management Plan (RBMP). The wider environmental objectives of the RBMPs that are relevant to physical works are:
    - to prevent deterioration of the status or potential of surface waters and groundwater; and
    - to aim to achieve good status for all water bodies (or for heavily modified water bodies and artificial water bodies, good ecological potential) and good surface water chemical status.
  - If a high level of confidence that your activity supports the objectives of your RBMP cannot be reached then you need to carry out more investigation into the risks on WFD receptors and possible ways of managing those risks. After amending the project to avoid, minimise, mitigate or compensate for the risks to WFD receptors the following questions need to be addressed:
    - could the activity still cause a water body (catchment/sub-catchment) to deteriorate from one WFD status class to another or cause significant localised impacts that could contribute to this happening?
    - could the activity prevent or undermine action to get water bodies to good status?
  - If the answer to the above questions is yes and your activity still does not support RBMP objectives, it will need to be demonstrated that the project meets the sustainability criteria set out in Article 4(7) of the WFD. Article 4(7) sets out stringent environmental and socio-economic tests to assess if a scheme meets strict environmental and sustainability criteria.
- 3.1.2 **Table 10D.7** summarises the risk that the Project may have in relation to the achievement of objectives for the Wharfe Magnesian Limestone, Aire & Don Magnesian Limestone and SUNO Sherwood Sandstone groundwater bodies.

## 3.2 Stage 1

- 3.2.1 The WFD protects surface water bodies and groundwater bodies. This assessment covers the Wharfe Magnesian Limestone groundwater body (ID: GB40401G701100), the Aire and Don Magnesian Limestone groundwater body (ID: GB40401G700900) and

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<sup>5</sup> Environment Agency (2016) Water Framework Directive Risk Assessment: How to Assess the Risks of your Activity [online]. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/522426/LIT\\_10445.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/522426/LIT_10445.pdf) (Accessed 15 April 2019).

the SUNO Sherwood Sandstone groundwater body (ID: GB40401G702100). The assessment does not cover the Wharfe and Lower Ouse groundwater body at this time, for the reasons previously explained, or surface water bodies (these are considered in **Chapter 9: Hydrology**). In summary, the assessment covers the appropriate hydrogeological receptors protected by the WFD.

### 3.3 Stage 2: Groundwater - Deterioration

- 3.3.1 The WFD objectives for the Wharfe Magnesian Limestone groundwater body are detailed in **Table 10D.2**. The overall objective set by the Environment Agency is Good by 2027.
- 3.3.2 The WFD objectives for the Aire and Don Magnesian Limestone groundwater body are detailed in **Table 10D.3**. The overall objective set by the Environment Agency is Good by 2027.
- 3.3.3 The WFD objectives for the SUNO Sherwood Sandstone groundwater body are detailed in **Table 10D.4**. The overall objective set by the Environment Agency is Good by 2027.
- 3.3.4 The main reasons why the Aire & Don Magnesian Limestone groundwater body is not achieving Good WFD status are defined by the Environment Agency as poor nutrient management, private sewage treatment, and in one case, the result of natural conditions (see **Table 10D.5**).
- 3.3.5 The main reasons why the SUNO Sherwood Sandstone groundwater body is not achieving Good WFD status are defined by the Environment Agency as poor nutrient management, private sewage treatment, and natural conditions. The reason for failure of three classification elements is pollution from rural areas and pollution from towns, cities, and transport. The reason for failure in respect to natural conditions is unknown (see **Table 10D.6**).

#### *Construction phase*

- 3.3.6 The activities involved with the construction of the Project are described in **Chapter 3: Description of the Project**. The construction activities described in **Chapter 3** that are most relevant to the WFD assessment are summarised as follows, to more clearly assess the impacts on the WFD of each groundwater body:
- Earthworks including excavations.
  - Dewatering of excavations.
  - Discharge of groundwater from dewatering.
  - Use of machinery and storage of chemicals.
  - Soil stripping and vegetation removal.
  - Soil compaction.
  - Construction of impermeable surfaces such as roads/pavements.
  - Construction of subsurface infrastructure such as foundations.
  - Use of cement and concrete and lime stabilisation.

3.3.7 The screening of these activities and an assessment of the impacts of these on the capacity for the groundwater bodies to achieve good overall status is detailed in **Table 10D.7**.

#### *Operational phase*

3.3.8 The activities involved with the construction of the Project are described in **Chapter 3: Description of the project**, with those most relevant to the WFD assessment summarised as follows:

- Presence of impermeable surfaces.
- Use of motorised vehicles and fuel storage/refuelling facilities (including underground fuel storage tanks), which introduces a risk of the spillage/leakage of hydrocarbon fuels.
- De-icing of roads, walkways and parking areas.
- New drainage regime in hard surfaced areas.

3.3.9 The screening of these activities and an assessment of the impacts of these on the capacity for the groundwater bodies to achieve good overall status is detailed in **Table 10D.7**.

**Table 10D.7 - Assessment of Impacts of the Project on WFD Status**

<b>WFD Element</b>	<b>Wharfe Magnesian Limestone (Tadcaster Focus Area)</b>	<b>Aire &amp; Don Magnesian Limestone (Monk Fryston Focus Area)</b>	<b>SUNO Sherwood Sandstone (Overton Focus Area)</b>
<b>Assessment of WFD impacts</b>			
<i>Quantitative status element</i>			
Saline Intrusion	It is highly unlikely that the construction and operation of the Project will increase salinity in the groundwater body. This groundwater body currently achieves Good status for quantitative saline intrusion. This status would be compromised by over abstraction or rising sea levels which will not occur as a result of the construction and operation of the Project.	As Wharfe Magnesian Limestone.	As Wharf.e Magnesian Limestone.
Water Balance	Water balance is anticipated to be at low risk of being impacted significantly during construction and operation. Though excavations are expected during construction, these will be shallow and would not intersect groundwater in the bedrock aquifer, which is expected to be between 37m and 44m bgl, and any dewatering would not be from groundwater body ingress. During operation, impermeable surfaces may reduce infiltration into the bedrock, thus affecting the overall water balance. However, due to the small size of the	Construction excavations at Monk Fryston are expected to be satisfactorily shallow as to not encounter the bedrock or groundwater within the bedrock. Groundwater levels here are around 30 m bgl so it is not anticipated that dewatering of the excavations would include groundwater contributions from the limestone aquifer. Any dewatering and subsequent discharge will be perched groundwater, surface water run off and/or rainfall. As with the Tadcaster Focus Area, during operation impermeable surfaces may reduce infiltration into the bedrock aquifer,	The groundwater level within the aquifer is expected to be around 15m bgl in the location of the 2TW/YR duck under site, and approximately 7m bgl at the Overton Substation site, both well below the base of any construction excavations required for underground cabling or foundations. Dewatering would be expected to be restricted to perched groundwater, surface water and/or rainwater. During operation, the presence of impermeable surfaces may increase surface run-off so there is a minimal risk that the development will prevent the

WFD Element	Wharfe Magnesian Limestone (Tadcaster Focus Area)	Aire & Don Magnesian Limestone (Monk Fryston Focus Area)	SUNO Sherwood Sandstone (Overton Focus Area)
<b>Assessment of WFD impacts</b>	impermeable surfaces (40m x 50m) any effects on infiltration will be negligible.	however as this location is underlain by a moderately impermeable barrier, recharge is already impeded. Construction and operation activities are unlikely to prevent the groundwater body achieving Good status.	groundwater body achieving Good status.
GWDTEs Test	The impact of the Project on this WFD element can be screened out as the nearest GWDTE is 2.4km south-east and the proposed works at the Tadcaster Focus Area are not sufficiently disruptive to cause a potential effect over such a large distance.	A groundwater outlet point arises 1.34km south of the Monk Fryston Substation site, to supply a large pond in Burton Salmon. This is likely supported by the Aire & Don Magnesian Limestone groundwater body, though it is unlikely that the construction or operation of the Project will affect the quantitative element of the GWDTE due to the small scale of the Project activities. Additionally, the groundwater outlet point arises where there are no superficial deposits and thus recharge is uninhibited. The outlet point and pond are likely primarily dependent on that localised recharge and not recharge upstream where there is a confining layer of Harrogate Till.	The nearest GWDTEs are more than 5km away from the draft Order Limits. The construction and operation of the Project will not affect GWDTEs at this distance.
Dependent Surface Water Body Status	Within the area, a drain is present to the south-west as well as the Cock Beck to the east. These are not covered in this WFD assessment. No barriers would be installed that would limit water connectivity between the fluvial waterbody and the groundwater	Several drains and ponds are in proximity to the location of the new substation and the Ledsham Beck 2.2km west of the Monk Fryston Substation. These are not covered in this WFD assessment. No barriers would be installed that would limit water connectivity between the	Moor Gutter leading to Hurns Gutter is present in the locale of Overton Focus Area, as well as some small drains. These are not covered in this WFD assessment. No barriers would be installed that would limit water connectivity between the fluvial



WFD Element	Wharfe Magnesian Limestone (Tadcaster Focus Area)	Aire & Don Magnesian Limestone (Monk Fryston Focus Area)	SUNO Sherwood Sandstone (Overton Focus Area)
<b>Assessment of WFD impacts</b>	body. Therefore, there are no anticipated impacts that could cause deterioration of a dependent surface waterbody.	fluvial waterbody and the groundwater body. Therefore, there are no anticipated impacts that could cause deterioration of a dependent surface waterbody.	waterbody and the groundwater body. Therefore, there are no anticipated impacts that could cause deterioration of a dependent surface waterbody.
<i>Chemical status element</i>	The Tadcaster Focus Area does not fall into a drinking water safeguard zone for groundwater or surface water. However, since there is no confining layer and the location is in a NVZ and SPZ3, consideration of the chemical status element cannot be screened out. During the construction and operation of the Project, the embedded environmental measures as laid out in Table 10.8 of Chapter 10: Geology and Hydrogeology would be adopted, to prevent deterioration of groundwater and to prevent deterioration of WFD status and the achievement of the WFD objectives of this element. The Outline Construction Environmental Management Plan (CEMP) will provide a compliance mechanism for these measures.	Monk Fryston substation does not fall into a drinking water safeguard zone for groundwater or surface water. There is a confining, impermeable layer of clay rich till which will impede/prevent vertical contaminant migration. The risk to the WFD status is low and any impact would be negligible, particularly considering the adoption of the embedded measures in Table 10.8 of Chapter 10: Geology and Hydrogeology.	The Overton Focus Area (specifically the proposed Overton Substation site and 2TY/YR duck under at Shipton by Beningbrough) are located within a drinking water safeguard zone for surface water. Neither location is in a SPZ or NVZ. During the construction and operation of the Project, the embedded environmental measures as laid out in Table 10.8 of Chapter 10: Geology and Hydrogeology would be adopted, to prevent deterioration of groundwater and to prevent deterioration of WFD status and the achievement of the WFD objectives of this element. The Outline CEMP will provide a compliance mechanism for these measures.
General chemical test	During the construction and operation of the Project, the embedded environmental measures as laid out in	The Environment Agency provide reasons why this groundwater body is not achieving Good status regarding the	The Environment Agency provided reasons why this groundwater body is not achieving Good status regarding the

WFD Element	Wharfe Magnesian Limestone (Tadcaster Focus Area)	Aire & Don Magnesian Limestone (Monk Fryston Focus Area)	SUNO Sherwood Sandstone (Overton Focus Area)
<b>Assessment of WFD impacts</b>	Table 10.8 of Chapter 10: Geology and Hydrogeology should be adopted, to prevent deterioration of groundwater and to prevent deterioration of WFD status and the achievement of the WFD objectives of this element. The Outline CEMP will provide a compliance mechanism for these measures. Therefore, the Project would not be expected to cause meaningful deterioration of the WFD status or prevent achievement of the objectives.	general chemical test. This is attributable to poor nutrient and pesticide management. The presence of the proposed Monk Fryston Substation may assist with the objective of Good status in this regard, since the (previously agricultural) land used for the new substation will no longer be farmed, and therefore there will be an overall reduction in pesticide and nutrient input into the groundwater body. During construction, pollution prevention measures will be adopted to prevent deterioration of the groundwater body (see Table 10.8 of Chapter 10: Geology and Hydrogeology).	general chemical test. This is attributable to poor nutrient and pesticide management, as well as natural conditions and private sewage treatment. Since the Project will be built on agricultural land, this may reduce nutrient and pesticide input, which may assist with the objective of an improvement in the WFD status of this groundwater body during operation. During construction, pollution prevention measures will be adopted to prevent deterioration to the groundwater body (see Table 10.8 of Chapter 10: Geology and Hydrogeology).
Chemical GWDTEs test	The nearest GWDTE is Stutton Ings approximately 2.4km south-east of the Tadcaster Focus Area. Due to the large distance between the Focus Area and the GWDTE and embedded measures that will protect groundwater at the Tadcaster Focus Area (see Table 10.8 of Chapter 10: Geology and Hydrogeology), the risk to the WFD status of the GWDTE can be screened out.	The chemical status of any GWDTEs within proximity of the draft Order Limits will not be impacted negatively by the development. The footprint of this substation is relatively small (0.082km <sup>2</sup> ), so any groundwater contamination is not likely to effect GWDTEs (the closest of which is 2km south). The risk that the project will impact the WFD status and achievement of the objectives can be screened out.	The nearest GWDTEs to the Overton substation and Shipton by Beningbrough duck under are more than 5km away from these locations. As such, the risk of the Project impeding the objectives of the WFD for the SUNO Sherwood sandstone are negligible. However, it is important that pollution measures are in place to prevent contaminant migration into nearby surface water courses since these developments are within a drinking water safeguard zone.
Chemical dependent	During the construction phase, pollution prevention measures will be	During the construction phase, pollution prevention measures will be adopted to	During the construction phase, pollution prevention measures will be adopted to

WFD Element	Wharfe Magnesian Limestone (Tadcaster Focus Area)	Aire & Don Magnesian Limestone (Monk Fryston Focus Area)	SUNO Sherwood Sandstone (Overton Focus Area)
surface water body status	<p>adopted to prevent deterioration of the groundwater body (see Table 10.8 of Chapter 10: Geology &amp; Hydrogeology). Provided these measures are included the Project is not expected to cause meaningful deterioration of the chemical dependent surface water body status or prevent achievement of the objectives.</p>	<p>prevent deterioration of the groundwater body (see <b>Table 10.8 of Chapter 10: Geology &amp; Hydrogeology</b>). Provided these measures are included the Project is not expected to cause meaningful deterioration of the WFD chemical status or prevent achievement of the objectives</p>	<p>prevent deterioration of the groundwater body (see Table 10.8 of Chapter 10: Geology &amp; Hydrogeology). Provided these measures are included the Project is not expected to cause meaningful deterioration of the chemical status of the groundwater body.</p>
Chemical saline intrusion	<p>There is no risk that excavations and soil stripping during the construction phase will increase salinity. The Project is not expected to cause meaningful deterioration of the WFD status of the groundwater body or prevent the Wharfe Magnesian Limestone from achieving its objective.</p>	<p>There is no risk that excavations and soil stripping during the construction phase will increase salinity. The Project is not expected to cause meaningful deterioration to the WFD status of the Aire &amp; Don Magnesian Limestone groundwater body or prevent achievement of the objectives.</p>	<p>There is a no risk that excavations and soil stripping during the construction phase will increase salinity. The Project is not expected to have any meaningful impact on the SUNO Sherwood Sandstone groundwater body achieving Good status.</p>

### 3.4 Stage 3

- 3.4.1 There is a high level of confidence that activities associated with the construction and operation of the Project in the three Focus Areas will support the objectives of the WFD for the discussed groundwater bodies. Therefore, Stage 3 is not required.
- 3.4.2 The Project will be designed and constructed in line with relevant guidance and legislation, and encompass the measures detailed in **Table 10.8** of **Chapter 10: Geology and Hydrogeology**. Adherence to these measures will be secured through an Outline CEMP.
- 3.4.3 Therefore, the Project is unlikely to cause a deterioration in WFD status class or prevent waterbodies in these catchments from achieving WFD objectives.

### 3.5 Stage 4

- 3.5.1 Stage 4 is not required.

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