Gate Burton
ENERGY PARK

Gate Burton Energy Park Environmental Statement

Volume 3, Appendix 9-E: Water Summary of Non-Significant Effects
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APFP Regulation 5(2)(a)
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Gate Burton Energy Park Limited

Prepared for:

Gate Burton Energy Park Limited

Prepared by:

AECOM Limited

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1. Summary of Non-Significant Effects

1.1 Purpose of this appendix

1.1.1 This Environmental Statement appendix provides a summary of the non-significant effects that are described in **ES Volume 1, Chapter 9: Water Environment) [EN010131/APP/3.1].** As discussed within **Chapter 9: Water Environment**, no significant effects have been identified.

1.2 Summary of Non-Significant Effects

Table 1 Summary of non-significant effects on surface water quality and morphology, and groundwater quality and resource during construction for both the Solar and Energy Storage Park and Grid Connection Corridor

Receptor	Importance (Value)	Description of Impact	Magnitude of Impact	Effect category
River Trent	Very High (for water quality)	Impact on water quality from fine sediment mobilisation and chemical spillages	Negligible	Slight adverse (not significant)
Marton Drain; Seymour Drain.	High Importance (for water quality)	Impact on water quality from fine sediment mobilisation and chemical spillages	Minor adverse	Slight adverse (not significant)
Tributary of the Till and Skellingthorpe Main Drain	High Importance (for water quality)	Impact on water quality from fine sediment mobilisation and chemical spillages	Negligible	Slight adverse (not significant)
Causeway Drain	Medium Importance (for water quality)	Impact on water quality from fine sediment mobilisation and chemical spillages	Minor adverse	Slight adverse (not significant)
Padmoor Drain; Mother Drain; Littleborough Lagoon; Coates Wetland and Cottam Wetland	Medium Importance (for water quality)	Impact on water quality from fine sediment mobilisation and chemical spillages	Negligible	Neutral (not significant)
Agricultural drainage ditches and small ponds	Low Importance (for water quality)	Impact on water quality from fine sediment mobilisation and chemical spillages	Minor adverse	Slight adverse (not significant)
Seymour Drain; Marton Drain; Agricultural Ditches	Low Importance (for morphology)	Impact on morphology due to culverting or open cut cable installation for the Grid Connection Corridor	Moderate adverse	Slight adverse (not significant)

Groundwater	Medium	Impact on groundwater flow	Negligible	Neutral (not significant)
Groundwater	Medium	Impacts on water supplies (abstraction licenses/PWS)	Negligible	Neutral (not significant)
Groundwater	Medium	Impact on groundwater quality from mobilisation of contaminants	Negligible	Neutral (not significant)
Groundwater	Medium	Potential for groundwater ingress at HDD launch / receiving and jointing pits	Minor	Slight adverse (not significant)

Table 2 Summary of non-significant flood risk effects during construction – Solar and Energy Storage Park

Receptor	Importance (Value)	Description of Impact	Magnitude of Impact	Effect category
Flooding from fluvial sources during construction	Very high (construction workers)	Increased flood risk could put workers at risk	Negligible	Slight adverse (not significant)
Flooding from surface water sources during construction	Very high (construction workers)	Increased flood risk could put workers at risk	No change	Neutral (not significant)
Flooding from groundwater sources during construction	Very high (construction workers)	Increased flood risk could put workers at risk	No change	Neutral (not significant)
Flooding from artificial sources and drainage infrastructure during construction	Very high (construction workers)	Increased flood risk could put workers at risk	No change	Neutral (not significant)

Table 3 Summary of non-significant effects on Flood Risk during construction – Grid Connection Corridor

Receptor	Importance (Value)	Description of Impact	Magnitude of Impact	Effect category
Flooding from fluvial sources during construction	Very high (construction workers)	Increased flood risk could put workers at risk	Negligible	Slight adverse (not significant)
Flooding from surface water sources during construction	Very high (construction workers)	Increased flood risk could put workers at risk	No change	Neutral (not significant)
Flooding from groundwater sources during construction	Very high (construction workers)	Increased flood risk could put workers at risk	No change	Neutral (not significant)

Receptor	Importance (Value)	Description of Impact	Magnitude of Impact	Effect category
Flooding from artificial sources and drainage infrastructure during construction	Very high (construction workers)	Increased flood risk could put workers at risk	No change	Neutral (not significant)

Table 4 Summary of non-significant effects on surface and groundwater quality, watercourse morphology and water resource during operation for both the Solar and Energy Storage Park and Grid Connection Corridor

Receptor	Importance(Value)	Description of Impact	Magnitude of Impact	Effect category
River Trent	Very High Importance (for water quality)	Improved water quality from taking land out of agricultural usage	No change	Neutral (not significant)
Marton Drain; Seymour Drain; Tributary of the Till, Till and Skellingthorpe Main Drain	High Importance (for water quality)	Improved water quality from taking land out of agricultural usage	No change	Neutral (not significant)
Padmoor Drain; Mother Drain; Causeway Drain	Medium Importance (for water quality)	Improved water quality from taking land out of agricultural usage	No change	Neutral (not significant)
Agricultural drainage ditches and small ponds	Low Importance (for water quality)	Improved water quality from taking land out of agricultural usage	No change	Neutral (not significant)
Agricultural drainage ditches (including Causeway Drain	Low Importance (for morphology)	Impact on morphology related to new access track crossings	Moderate	Slight adverse (not significant)
Agricultural drainage ditches	Low Importance (for morphology)	Impact on morphology from extension of existing culverts	Moderate	Slight adverse (not significant)
Agricultural Drainage Ditches	Low Importance (for morphology)	Impact on morphology related to open cut installation of grid connection pipeline	Moderate	Slight adverse (not significant)
Groundwater	Medium Importance	Impact on water quality from routine runoff and spillages	Negligible	Neutral (not significant)
Groundwater	Medium Importance	Impact on groundwater recharge from changing land use, with potential impact on groundwater abstraction	Negligible	Neutral (not significant)

Table 5 Summary of non-significant flood risk effects during Operation – Solar and Energy Storage Park

Receptor	Importance (Value)	Description of Impact	Magnitude of Impact	Effect category
Flooding from surface water sources during operation	Low majority of site, to high in shallow areas.	Increased surface water flood risk on or off site due to the Scheme.	No change	Neutral (not significant)
Flooding from fluvial sources during operation	Low, with very high around Padmoor drain.	Increased fluvial flood risk on or off site due to the Scheme	No change	Neutral (not significant)
Flooding from groundwater sources during operation	Low to very low.	Increased groundwater flood risk on or off site due to the Scheme	No change	Neutral (not significant)
Flooding from artificial sources and drainage infrastructure during operation	Low	Increased flood risk from artificial sources or drainage infrastructure on or off site from the Scheme.	No change	Neutral (not significant)

Table 6 Summary of non-significant effects on Flood Risk during Operation – Grid Connection Corridor

Receptor	Importance (Value)	Description of Impact	Magnitude of Impact	Effect category
Flooding from fluvial sources during operation	Mostly very high in River Trent floodplain.	Increased fluvial flood risk on or off site due to the Scheme	No change	Neutral (not significant)
Flooding from surface water sources during operation	Low majority of site, to high in shallow areas.	Increased surface water flood risk on or off site due to the Scheme.	No change	Neutral (not significant)
Flooding from groundwater sources during operation	High	Increased groundwater flood risk on or off site due to the Scheme	No change	Neutral (not significant)
Flooding from artificial sources and drainage infrastructure during operation	Low	Increased flood risk from artificial sources or drainage infrastructure on or off site from the Scheme.	No change	Neutral (not significant)