Grand Union Canal Transfer

Appendix 22-PD-4: Tame Valley Gravel Pits - Assessment of Potential Groundwater Level Changes

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1. Introduction

1.1.1 This technical note has been produced as an appendix to **Chapter 22: Water Environment and Flood Risk** (**Volume 2**) of the PEI Report for the Grand Union Canal Transfer (GUCT) project (the 'Proposed Development'). . There has been concern raised by the users of the Kingsbury Water Park gravel lakes along the River Tame about impacts to the lake levels. Reduction in flow to the river from the reduced discharge from Minworth Wastewater Recycling Centre (WwRC) during periods of operation of the Proposed Development has the potential to impact the groundwater levels across the area and the water level in the surrounding gravel lakes. The Gravel lakes are located within Kingsbury Water Park area, which is a country park, approximately 1 km to the north of the Proposed Development.

1.1.2 The lakes are used for water sports, and the Tamworth Sailing Club have highlighted that the water levels in the lakes tend to reduce to low levels during dry summers in line with the river levels and potentially groundwater levels. They are concerned about a further reduction in levels as a result of proposed reduced effluent discharge during the operation of the Proposed Development.

1.2 Aims and Objectives

1.2.1 The aim of this technical note is to develop a conceptual model of the surface water and groundwater relationships around the gravel lakes along the Tame Valley, in particular the Kingsbury Water Park in order to assess if there will be a potential significant impact on the water level in the gravel lakes due to the Proposed Development.

The aim of this technical note is to:

a. Review relevant previous environmental or hydrological assessments of GUCT SRO Review including the new Gate 3 modelling data on the level changes in the River Tame (section 2);
b. Prepare a conceptual site model for the gravel lakes area to understand the potential groundwater / surface water across the area (section 4); and
c. Assess the significance of any potential impact on groundwater levels and related water levels in the gravel lakes (section 5).

1.3 Study Area

1.3.1 The Kingsbury Water Park is located along the River Tame, see **Figure 22-A4-1** showing from 2 km downstream of the current discharge point (SP

16479 91529) from Minworth WwRC to the confluence with the River Trent. The focus is on the Kingsbury Water Park as this has not been specifically investigated in previous assessments as part of Gate 2 and 3 work referenced below which assessed impacts to surface water dependent terrestrial ecosystems (SWDTE) and groundwater dependent terrestrial ecosystems (GWDTE) along the Rivers Tame and Trent.

1.4 Data Sources

1.4.1 A range of sources were accessed to collate the relevant information for the study area and complete the desk-based assessment. These sources include:

a. The DEFRA application Multi-Agency Geographic Information for the Countryside (MAGIC) map;
b. BGS GeoIndex Geological Mapping;
c. BGS GeoIndex Historical Borehole logs; and
d. Environment Agency Hydrology Explorer

2. Previous Assessments

2.1.1 In the following section, a summary of the relevant previous environmental or hydrological assessments of GUCT SRO undertaken as part of the gated Regulators' Alliance for Progressing Infrastructure Development (RAPID) process is provided. These Reports do not cover the impacts on the Kingsbury Water Park from potential groundwater level changes but provide information which will inform this assessment.

Environmental Assessment for the Trent Strategic Resource Options (SRO) Minworth SRO and South Lincolnshire Reservoir (SLR) SRO Appendix A: SSSI Interaction AECOM September 2022 (Ref. 4)

2.1.2 The Gate 2 Environmental Assessment looked at the potential impacts of reduction of discharge to the Tame on the various Sites of Special Scientific Interest (SSSI) along the Tame and Trent and a list of priority SSSI were identified. Since the Kingsbury Water Park is not a SSSI, this was not assessed at the time.

2.1.3 However, the Kingsbury Water Park (Wetland areas) were assessed in the Gate 2 *Environmental Assessment for the Tame and Trent Strategic Resource Options (SRO), REP-003_Summary Report September 2022*. The impacts on the wetland habitats and the species they support, due to reduction in discharge from Minworth WwRC. The potential lowering of river baseflows due to the proposed transfer was considered to be neutral but it was recommended that further assessment of the connectivity of existing channels to the River Tame should be undertaken.

2.1.4 At Whitacre Heath SSSI, one of the priority sites along the Tame Valley, it was concluded that the water features on the site, are not connected to the superficial deposits, and so are hydraulically isolated from the River Tame. The ponds are dependent on rainfall ponding on the low permeability ground comprising predominantly mudstone. The Whitacre Heath ponds are anticipated to also be supported by flooding of the site. The reduction in flow due to the Minworth GUCT SRO is not anticipated to prevent flooding of the site to support water features, as the maximum percentage of the baselined Q5 flows that are removed by the Proposed Development is 8%.

Minworth SRO Gate 3 Annex B1.6 Tame and Trent Hydrological and Hydraulic Modelling Report, AECOM January 2025 (Ref. 6)

2.1.5 This modelling built on the Gate 2 modelling: considering the impact of medium emissions climate change scenario (RCP6.0) on the river system and the subsequent impacts of the Minworth SRO abstraction. There will be a Hands-off Flow restriction put on the Minworth SRO, to cease diverting the recycled discharge, in order to protect the flow in the rivers and impacts on other abstractors during dry periods. The steady state flow conditions were simulated for five flow conditions, including the addition Extreme Low Flow (ELF) condition to replicate a severe drought year.

2.1.6 The water levels in the River Tame vary diurnally due to the varying discharge volume from the Minworth WwRC within a 24hr period. The Gate 3 modelling includes the change in the daily maximum and minimum river water levels. Scenario A (SA) is the result of taking the maximum flow from Minworth for the GUC SRO (115 Mld^{-1}) only. The results show that at Q95 low flows in the river, the modelled change in the water level due to the SRO operation maximum abstraction rates (115 Mld^{-1}) is less than 50% of the current daily variation in the river level.

2.1.7 The model results show the change from the baseline of the daily minimum water level is about -0.09 m in both Q99 and Q95 low flows, as seen on **Plate 1**.

2.1.8 The results at Kingsbury Water Park in 1D steady state, presented in **Table 1**, show the maximum predicted water level change is 10.1cm in EFL, a manually reduced extreme hydrology scenario (used as a proxy for RCP8.5 high emission and driest regional climate model) and a change of 8.3 cm at Q95. The baseline is the modelled flow condition without the impacts of the SRO but including other current abstractions.

Table 1: 1D model results River Tame Kingsbury Water Park

Flow condition	Baseline Stage (m AOD)	Scenario A Stage (m AOD)	Scenario A Water level change from baseline (m)	Scenario A Water depth change from baseline (%)
Q10	63.292	63.252	-0.039	-2.23%

Mean	62.994	62.938	-0.055	-3.76%
Q95	62.71	62.627	-0.083	-6.99%
Q99	62.675	62.595	-0.081	-6.99%
ELF	62.594	62.494	-0.101	-9.37%

Source: Minworth SRO Gate 3 Annex B1.6 Tame and Trent Hydrological and Hydraulic Modelling Report, AECOM January 2025

2.1.9 Although the changes to the water level based on the modelling is estimated at less than 10% in ELF, further baseline hydrogeological review is provided in the subsequent sections as part of this assessment to further understand the relationship between river levels and Kingsbury Water Park.

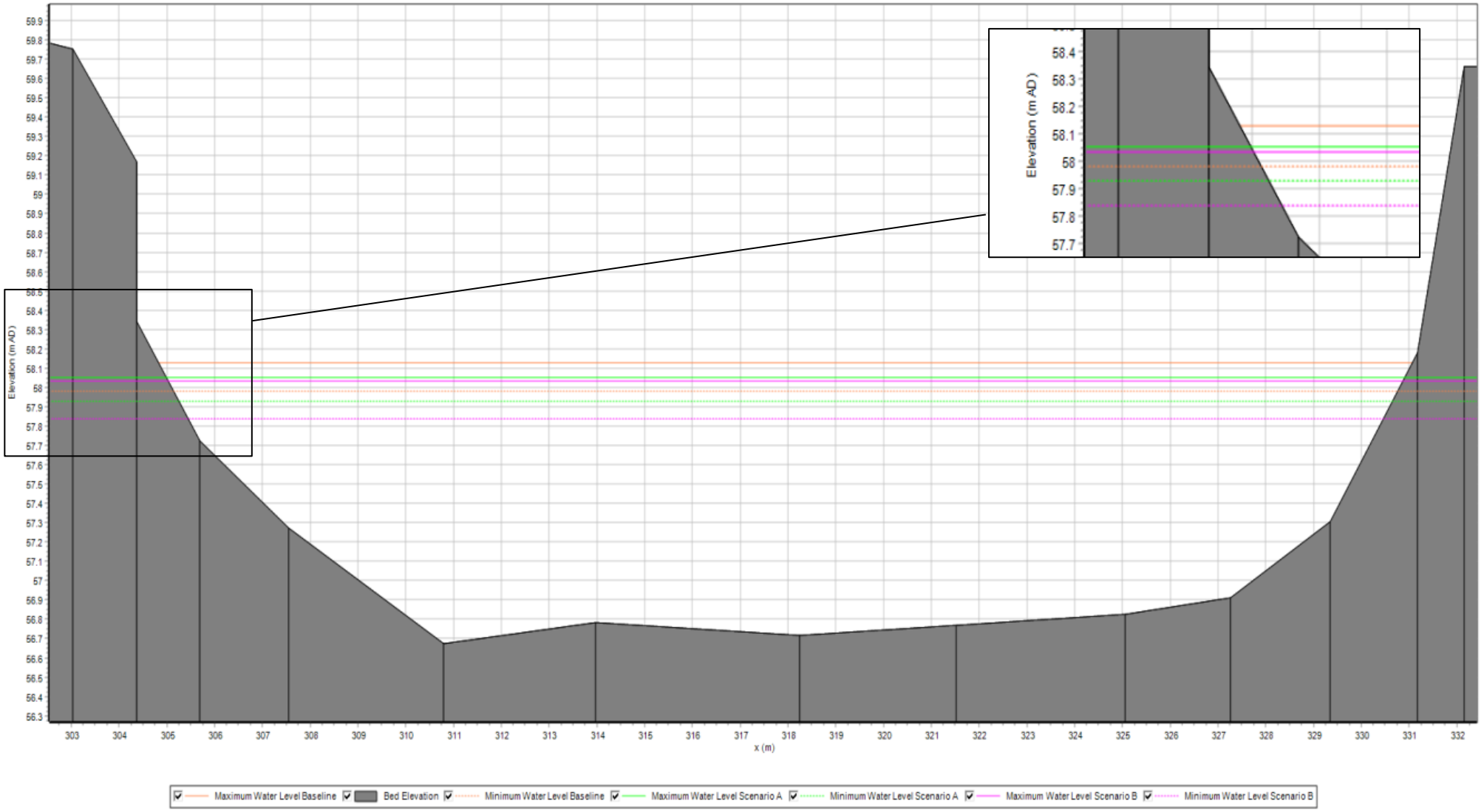

Plate 1: Water levels at cross section TM046047 (Kingsbury Water Park) for Q95 flow conditions
Source: Minworth SRO Gate 3 Annex B1.6 Tame and Trent Hydrological and Hydraulic Modelling Report, AECOM January 2025

Minworth SRO Gate 3 REP_MIN001-V1 Connectivity of Water Dependent Sites to the River Tame, November 2024 (Ref. 5)

2.1.10 This further assessment looked at the connectivity of local environmental features to the River Tame. Details from the Gate 2 assessments, topographical surveys results and hydraulic modelling were assessed to establish if the water dependent sites are connected to the River Tame and could be affected by the reduced water levels predicted from the Minworth SRO scenarios.

2.1.11 At the Kingsbury Water Park (Wetland areas) six potential connection points were assessed for connectivity to the River Tame, see **Figure 22-A4-1**. It is considered likely that the lakes are fed by a combination of groundwater, flood events from the River Tame and surface water from its tributaries to the west. Of the six connection points assessed, four were found to remain connected with the Tame (as outflows from the lakes) even at the lowest modelled flows (i.e. ELF), therefore the sites connectivity would not be affected by reduced flows in the Tame due to the Proposed Development. The remaining two points were not considered to be connected to the River Tame and were not assessed further. One, was a possible outlet or channel at SP 20720 97240 but following investigation, none was identified. No river connection feature could be established at point 2 (SP21460 95814).

2.1.12 As the connection to the River Tame is kept at all flow states there may be additional losses from the lakes due to the increase head difference. However, the greatest head difference of 10cm is only seen at ELF with the Proposed Development running at maximum capacity and considering the size of the lakes compared to the river this change would be buffered by the surrounding lakes leaving an insignificant change.

3. Baseline Data

3.1 Overview

3.1.1 This section provides an overview of the lakes and wetland features at and in the vicinity of the Kingsbury Water Park being considered in this assessment to determine the potential groundwater connectivity to the lakes.

3.1.2 Kingsbury Water Park, which is of county importance for breeding, passage and wintering waterbirds, is located along the River Tame, approximately 5.6 km north-east from the current Minworth WwRC discharge point. It is located north and south of the M42 and from the town of Marston to Cliff as shown in **Figure 22-A4-1**. The park consists of series of lakes and wetland area either side of the River Tame, spanning a length of approximately 3 km. The lakes were former gravel pits which have been subsequently filled with water.

3.1.3 The local elevation around the lakes area is between 62 m AOD and 73 m AOD[1].

3.2 Hydrology

3.2.1 The gravel lakes are located within the flood zone 3 of the River Tame. The river level in the Tame at Lea Martson just before Kingsbury Water Park, fluctuates daily due to the discharges from the Minworth WwRC. Modelling for Gate 3 gives the mean baseline river stage of the river. The baseline scenario is the 1D model with no operating SROs.

3.2.2 Kingsbury Water Park includes 15 Lakes (Ref. 7) which have a maximum depth of 1.8 m, but most range between 0.9 and 1.5 m depth (Ref. 8). The water level in the lakes is currently unknown, although Digital Terrain Model (DTM) 1 m shows it may be around 62- 64 m AOD. It is not known if the lake levels are controlled by weirs, but previous assessments and site visits indicates various levels of connectivity with the River Tame, its tributaries and other pools in the area, e.g. via channels / pipes. The lakes are not Water Framework Directive (WFD) waterbodies.

3.2.3 The lakes are used for various water sports including sailing and fishing, seasonal changes in the lakes have been reported by the lake users in line with the river level.

3.2.4 The River Tame runs northerly through the lakes with some meanders, it is isolated from the lakes by its banks either side. The mean baseline stage height of the river is between 61.29 and 63.81 m AOD within the study, see **Table 2**.

Table 2: River Stage and Bed Elevation within the study area

Cross Section (Figure 22-A4-1)	Bed elevation (m AOD)	Mean Baseline Stage (m AOD)	Mean Baseline Water Depth (m)
TM050781	62.5	63.807	1.307
TM046047	61.52	62.994	1.474
TM045789	61.496	62.876	1.38
TM044906	61.16	62.463	1.303
TM044515	60.871	61.923	1.052
TM043972	60.255	61.549	1.294
TM043631	59.991	61.371	1.38
TM043486	60.116	61.295	1.179

Source: Ref. 6: G3 T&T Modelling report Minworth SRO Gate 3 Annex B1.6 Tame and Trent Hydrological and Hydraulic Modelling Report, AECOM January 2025, see Figure 1 within the report for the cross-section locations.

[1] https://environment.data.gov.uk/dataset/13787b9a-26a4-4775-8523-806d13af58fc

3.2.5 Surveys undertaken for Gate 2 2D modelling and Gate 3 connectivity assessment, show the lakes are connected to the River Tame at various points as described in section 2. At the time of the surveys on 13 June 2023 and 12 March 2024, channels were identified connecting some of the lakes to the river, water was observed flowing from the ponds to the river in all cases.

3.3 Geology

3.3.1 The Kingsbury Water Park gravel lakes are underlain by the Sidmouth Mudstone Formation, a dominantly red-brown mudstone and siltstone. North of Cliff Pool to the north of the M42, the underlying bedrock comprises the Gunthorpe Member Mudstone, which is a red-brown mudstone with subordinate dolomitic siltstone and fine-grained sandstone.

3.3.2 BGS mapping indicates that there are no superficial deposits mapped below the gravel lakes themselves, as they are flooded historical quarries, where sand and gravel were previously extracted, see **Table 2** .The lakes are known to have flooded overtime, and some wetland areas such as Bodymoor Heath were infilled with some artificial ground. Superficial deposits are mapped surrounding the gravel pits. This includes Alluvium consisting of clay, silt, sand and gravel within the river flood plain, River Terrace Deposits and Head Deposits on the lateral boundaries. **Table 3** provides the general geological sequence on the site.

3.3.3 Based on the 1:50000 BGS geological mapping the alluvium deposits appear to be more dominant across the area and between the river and lakes, these are more cohesive than the River Terrace deposits, see **Figure 22-A4-2**.

Table 3: Geological Strata

Period	Geological Stratum	Stratum	Description
Quaternary	Alluvium	Superficial deposits	Clay, Sands and Silts
Quaternary	River Terrace Deposits	Superficial deposits	Sands and Gravel
Quaternary	Head Deposits	Superficial deposits	Poorly sorted, Clay silt Sand and Gravel
Triassic	Sidmouth Mudstone formation	Bedrock	Dominantly red-brown mudstone
Triassic	Gunthorpe Member	Bedrock	A sub-member of the Sidmouth mudstone red-brown mudstone with subordinate dolomitic siltstone and fine-grained sandstone

Source: Ref. 2

3.3.4 There are no site specific ground investigation records to confirm the profile of the lakes and the detailed geological / groundwater conditions below and

around the lakes, however a review of selected / available historical BGS records in the area shows variable thickness of superficial deposits comprising sandy clay and gravels from just 1 m (SP29NW27) in the north of Swann Pool to greater than 8.5 m (SP29NW113 along the M42 motor way). The bedrock is described as stiff brown and grey clay.

Hydrogeology

3.3.5 The Sidmouth Mudstone Formation and Gunthorpe Formations are described as a low productivity aquifer by the BGS hydrogeology map (Ref. 2). Largely argillaceous sequence with occasional sandstones yielding less than 0.5 L/s of water that can be highly mineralised. Both bedrock formations are classified by the Environment agency as a Secondary B aquifers meaning predominantly low permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

3.3.6 The superficial deposits, where present, are classified as Secondary A aquifers. This means they comprise permeable layers capable of supporting water supplies at a local rather than strategic scale and in some cases forming an important source of base flow to rivers. The superficial deposits aquifer is generally unconfined in the river valley. The lateral and vertical connectivity within the superficial deposits and with the river is unknown, this will depend on the extent of the alluvium and clay rich deposits present.

3.3.7 The BGS boreholes in the area drilled mainly before the development of the quarry pits suggest sand and gravel was present across most of the area at depths of approximately between 1 m and greater than 8 m below ground level, see selected BGS boreholes data in **Table 4**. The boreholes are mainly located East – West along the M42 carriageway across the lakes. In some locations clay layers are logged above the sand and gravel strata. Water strikes where seen in most boreholes in the sand and gravels. Water level strikes were recorded in the area between 60.4 m AOD and 64.7 m AOD, no water strikes are recorded within the bedrock.

Table 4: Selected BGS boreholes

Borehole ID	NGR (Easting Northing)	Ground Level (mAD)	Depth to bedrock (m bgl)	Groundwater Strike (mAOD)
SP19NE18	419880 296280	70.35	5.03	66.7
SP29NW9	420160 296430	67*	3.05	66.7*
SP29NW103	420330 296180	65.6	3.07	64.1
SP29NW106	420420 296300	66.2	6.2	64.7

Borehole ID	NGR (Easting Northing)	Ground Level (mAD)	Depth to bedrock (m bgl)	Groundwater Strike (mAOD)
SP29NW109	420480 296390	65.4	Not encountered at 8 m	62.4
SP29NW113	420580 296590	64.8	Not encountered at 8.5 m	None recorded
SP29NW115	420710 296700	64.5	2.9	None recorded
SP29NW116	420790 296840	63.8	2.8	62.3
SP29NW123	420870 297010	64.4	3.6	61.8
SP29NW124	420860 297070	63.3	3	60.4
SP29NW128	420900 297120	65.9	3.1	64
SP29NW120	420940 297180	64.54	3.9	63.04
SP29NW27	421480 295620	67*	1.2	65.38

Source: Ref. 3

**Ground level estimated from google earth*

4. Conceptual Site Model

4.1.1 **Plate 2Error! Reference source not found.** shows a conceptual model of gravel lakes developed based on the current available informaton.

4.1.2 The bedrock geology is unlikely to support much groundwater due to its low permeability nature. The strata will restrict vertical flow and support shallow groundwater conditions within the overlying superficial deposits.

4.1.3 The gravel rich superficial deposits of Alluvium and the River Terrace Deposits present around the lakes will be more permeable and water bearing, however, the clayey deposits within the Alluvium will also restrict groundwater flow.

4.1.4 The water level in the River Tame is within the same range as the historical groundwater strikes recorded in the superficial deposits, therefore it is expected that these are in continuity with the river. However, the current groundwater level / condition in the superficial deposits is unknown.

4.1.5 The lakes were formed following gravel extraction and the water levels in the lakes reflect a similar water table to the superficial aquifer in the surrounding area (based on records from historical BGS records). There may be lateral groundwater flow in the superficial deposits however this is dependent on the permeability and presence and absence of alluvial lenses. However, silt build up within the base of the lakes over time due to still water conditions is likely to result in reduced connectivity with the groundwater in the surrounding superficial deposits. Upward groundwater from the mudstones below is likely to be negligible due to their lower permeability.

4.1.6 Any groundwater level change within the superficial deposits due to the reduced river levels will be a function of the riverbed permeability, the superficial aquifer properties such as specific yield, and the head difference. This will cause a buffering effect to the water level change. Therefore, it is expected that the impact of the change in the river level on the groundwater levels due to the Proposed Development would not be significant and likely to be negligible.

4.1.7 Surveys show some of the lakes are connected to the river via small channels and these also control the water level within the lakes. Various studies / assessments completed as part of this Proposed Development indicates that the lakes / water bodies in the Tame Valley are likely to be recharged via the following methods: direct rainfall recharge, surface runoff, groundwater throughflow from the superficial deposits (where present) and the overtopping of flood water from the river, see **Plate 2**.

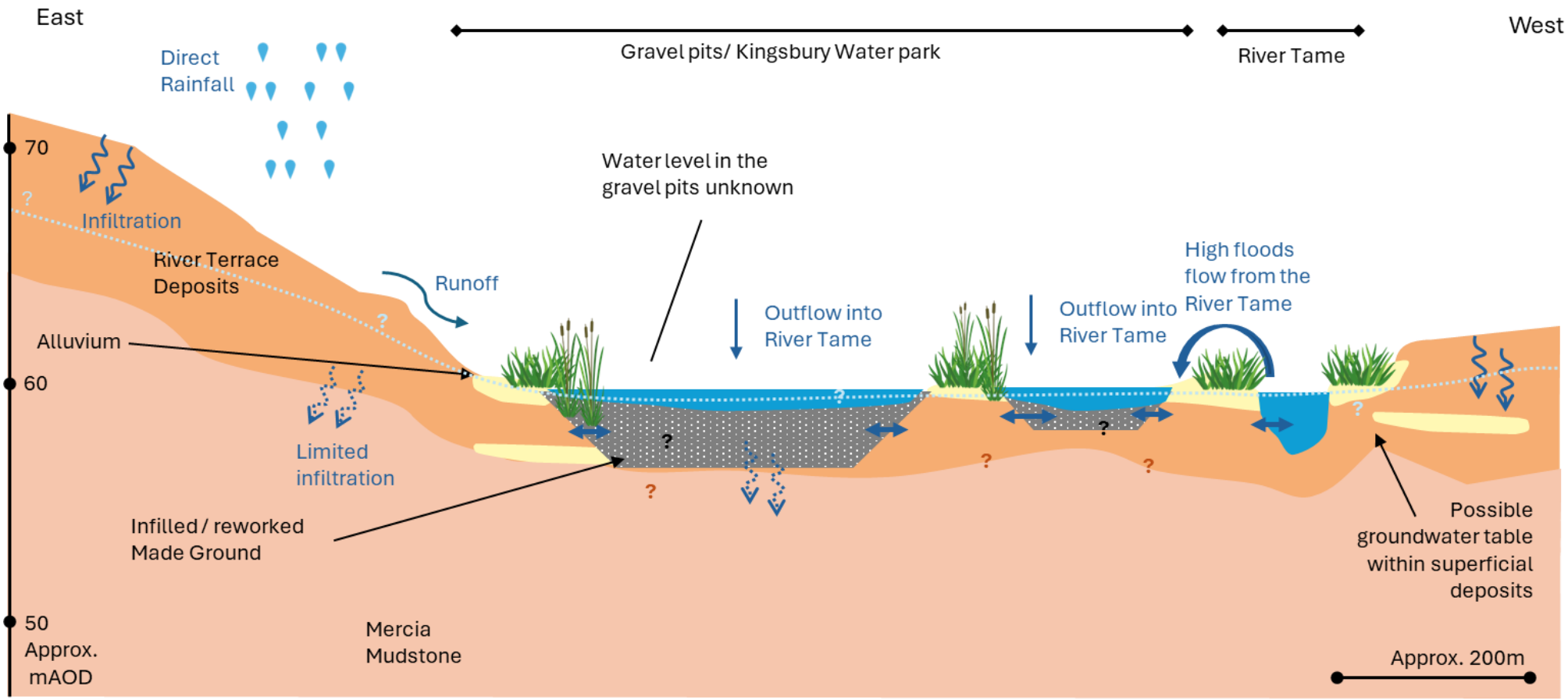

Plate 2: Conceptual Site Model

5. Assessment of Potential Impacts

5.1.1 The gravel lakes at Kingsbury Water Park were formed following gravel excavation, and their base is likely to sit directly on the underlying mudstone bedrock which has low permeability with restricted groundwater flow. It is not known if the base of any of the lakes is lined, however this is unlikely due to the comment from the sailing club which suggests observation of decline in the water level within the lakes during periods of low flow and low groundwater levels.

5.1.2 Superficial deposits are generally absent below the lakes but are likely to be present in the immediate surrounds including around the River Tame and its base. These deposits predominantly comprise alluvium around the river and the lakes with river terrace deposits also present beyond and around the alluvial deposits as shown on the geological maps and BGS logs.

5.1.3 Limited groundwater is present within the underlying bedrock that directly underlies the lakes, however, groundwater is present within the surrounding alluvium and in particular the river terrace deposits.

5.1.4 Similarly, there is potential for interaction between the water levels in the lakes and the groundwater within the pockets of residual superficial deposits present around the lakes. As a result, it is likely that the water level in the lakes will have some connectivity with the levels in the River Tame, however, the connection between the lakes, the groundwater and the river is likely to be dependent on the amount of siltation present on the beds of the lakes. It is likely that the level of connection has reduced over time due to the still-water conditions within the lakes and deposition of silt over time, hence reducing the hydraulic conductance of the lakes.

5.1.5 Seasonal changes in river level and flows will affect groundwater levels in the superficial deposits which will also have some effect on the lake levels. However, it is unlikely that the lake levels will change significantly especially if the silt deposits at the base of the lakes is extensive, but this cannot be verified at this stage.

5.1.6 Currently no groundwater level / surface water monitoring data is available from the lakes in this area or the groundwater level in the surrounding superficial deposits to verify the significance of the level of interaction between the groundwater level and the water level in the lakes except for the anecdotal information from the sailing club.

5.1.7 Latest hydraulic modelling predicts a maximum water level change in River Tame to be 10 cm at low flow conditions (ELF, extreme high emissions and driest regional climate model) and 8.1 cm at Q95. This change is small and is based on the maximum abstraction of 115 Ml/d. Business as usual

abstraction rate is expected to be around 60 M/d with summer drought operational rates likely to be between 80 and 115 Ml/d depending on the conditions. However, the modelling assesses the impact at steady state flow conditions rather than the transient effects of continued abstraction throughout over many years. Further details of the hydraulic modelling results are provided in Tame and Trent Hydrological and Hydraulic Modelling Report (Ref. 6).

5.1.8 Based on the current information available, such a change in the river level due to the operation of the Proposed Development. will not have a significant effect on the groundwater levels in the superficial deposits or the levels in the Kingsbury Water Park . Any changes in the river level are likely to be slowly propagated through the aquifer which should further minimise any potential impacts. The level of siltation within the lakes should also mask any potential effects. **Table 5** provides a summary of conclusions and recommendations.

5.1.9 This assessment is based on the desk study review if further site-specific GI becomes available, the assessment should be reviewed and updated.

Table 5: Summary of conclusions and recommendations

Report	Site	Conclusion	Recommendation
Gate 2 *Environmental Assessment for the Tame and Trent Strategic Resource Options (SRO), Ref. 3*	Kingsbury Water Park (Wetland areas)	The potential lowering of river baseflows due to the proposed transfer was considered to be neutral.	Recommended that further assessment of the connectivity of existing channels to the River Tame should be undertaken.
Minworth SRO Gate 3 Annex B1.6 Tame and Trent Hydrological and Hydraulic Modelling Report, AECOM January 2025, Ref. 5	Kingsbury Water Park	Maximum water level change in River Tame due to maximum abstraction rate to be 10 cm at low flow conditions (ELF, extreme high emissions and driest regional climate model) and 8.1 cm at Q95.	Modelling for a higher emission (RCP8.5) 2080s climate scenario to demonstrate sensitivity in more extreme climate change outcome
Minworth SRO Gate 3 REP_MIN001-V1 Connectivity of Water Dependent Sites to the River Tame, Ref. 4	Kingsbury Water Park	No modelled impact to connectivity to the River Tame during SRO operation.	No mitigation required
Appendix 22-4: Tame Gravel lakes	Kingsbury Water Park	Such a change in the river level due to the	Update the assessment if

Report	Site	Conclusion	Recommendation
Groundwater level change assessment		operation of the Proposed Development will not have a significant effect on the groundwater levels in the superficial deposits or the levels in the Kingsbury Water Park.	more data becomes available.

5.2 References

Ref. 1 The DEFRA application Magic maps (2026) Available at: https://magic.defra.gov.uk/MagicMap.html [Accessed 04/02/2026]

Ref. 2 BGS GeoIndex Geological Mapping (2026) Available at: https://mapapps2.bgs.ac.uk/geoindex/home.html?_ga=2.162744764.1443073691.1764770724-1159108380.1764770724, [Accessed 04/02/2026]

Ref. 3 BGS GeoIndex Historical Borehole logs (2026) Available at: https://www.bgs.ac.uk/information-hub/borehole-records/, [Accessed 04/02/2026]

Ref. 4 Environmental Assessment for the Trent Strategic Resource Options (SRO), Minworth SRO and South Lincolnshire Reservoir (SLR) SRO, Appendix A: SSSI Interaction, AECOM September 2022. Available at: https://www.severntrent.com/content/dam/sros-gate-2-documents/minworth/MinworthAnnex-B3.1.1-Appendix-A-SSSI-Redacted.pdf, [Accessed 04/02/2026]

Ref. 5 Minworth SRO Gate 3 Connectivity of Water Dependent Sites to the River Tame. Available at: https://www.severntrent.com/content/dam/sros-gate-3-documents/minworth/minworth-sro-gate3-annex-b3.1-water-dependent-habitats-connectivity-report-redacted.pdf , [Accessed 04/02/2026]

Ref. 6 Minworth SRO - Gate 3 - Tame and Trent Hydrological and Hydraulic Modelling Report, Annex B1.6, AECOM January 2025. Available at: https://www.severntrent.com/content/dam/sros-gate-3-documents/minworth/minworth-sro-gate3-annex-b1.6-tame-and-trent-hydrological-and-hydraulic-modelling-report-redacted.pdf , [Accessed 04/02/2026]

Ref. 7 Warwickshire County Council . Warwickshire Country Parks (2026) Available at: https://countryparks.warwickshire.gov.uk/homepage/6/kingsbury-water-park, [Accessed 04/02/2026].

Ref. 8 Kingsbury Water Park (2026) Available at: https://www.fisheries.co.uk/fishing/kingsbury-water-park/, [Accessed 04/02/2026].

Ref. 9 Environment Agency Catchment Data Explorer (2026). Available at: https://environment.data.gov.uk/catchment-planning/ [Accessed 04/02/2026]