

Proposed Visitor Parking Bays, Phase 6, Green Park Village, Reading

30 June 2026

Drainage Strategy Technical Note

- 1.1 This Technical Note (TN) has been prepared to support the application for 10 no. new visitor parking bays for the above site.
- 1.2 The existing road drains via a series of road gullies discharging to a roadside swale with land drain under. This is shown on drawing G259-GTA-SW-XX-DR-C-96-1001 in Appendix A. The existing road falls south to north and there are no gullies on the south side where the proposed parking is located. The roadside swale discharge via a land drain into a large shallow attenuation and infiltration tank located to the north side of the road. This allows some soakage into the ground, with overflow runoff directed via a 150mm diameter pipe to the lake.
- 1.3 The proposed parking bays will be graded to fall northwards, allowing surface water runoff to drain across the carriageway and into the existing highway gullies.
- 1.4 There are six existing road gullies located along the length of the proposed parking bays. Based on the existing highway drainage arrangement, each gully currently serves an average catchment area of approximately 88 m². Highway authorities typically accept a maximum catchment area of around 150m² per adopted road gully.
- 1.5 The proposed parking bays will increase the catchment to each gully by approximately **20 m²**, resulting in a total catchment area of approximately **108 m²** per gully. This remains comfortably below the typical maximum design catchment and demonstrates that the existing highway drainage system has sufficient capacity to accommodate the additional runoff generated by the proposed development.
- 1.6 Drawing G259-GTA-SW-XX-DR-C-96-1001 provides calculations to demonstrate that the catchment area of the new parking bays would have a minuscule effect on the depth of water in the lake during a peak storm. This is summarised in the following paragraph.

- 1.7 The proposed parking bays will create an additional impermeable catchment area of approximately 150 m². Assuming a 1 in 100-year rainfall event with a 40% allowance for climate change, equating to 150 mm of rainfall over 24 hours, the total runoff volume generated would be:

- Catchment area: 150 m²
- Design rainfall depth: 150 mm (0.15 m)
- Runoff volume: 22.5 m³

The receiving lake has an approximate surface area of **38,570 m²**. If the entire runoff volume from the proposed parking bays were discharged to the lake, it would result in an increase in water level of:

$$22.5 \text{ m}^3 \div 38,570 \text{ m}^2 = 0.00058 \text{ m (0.58 mm)}$$

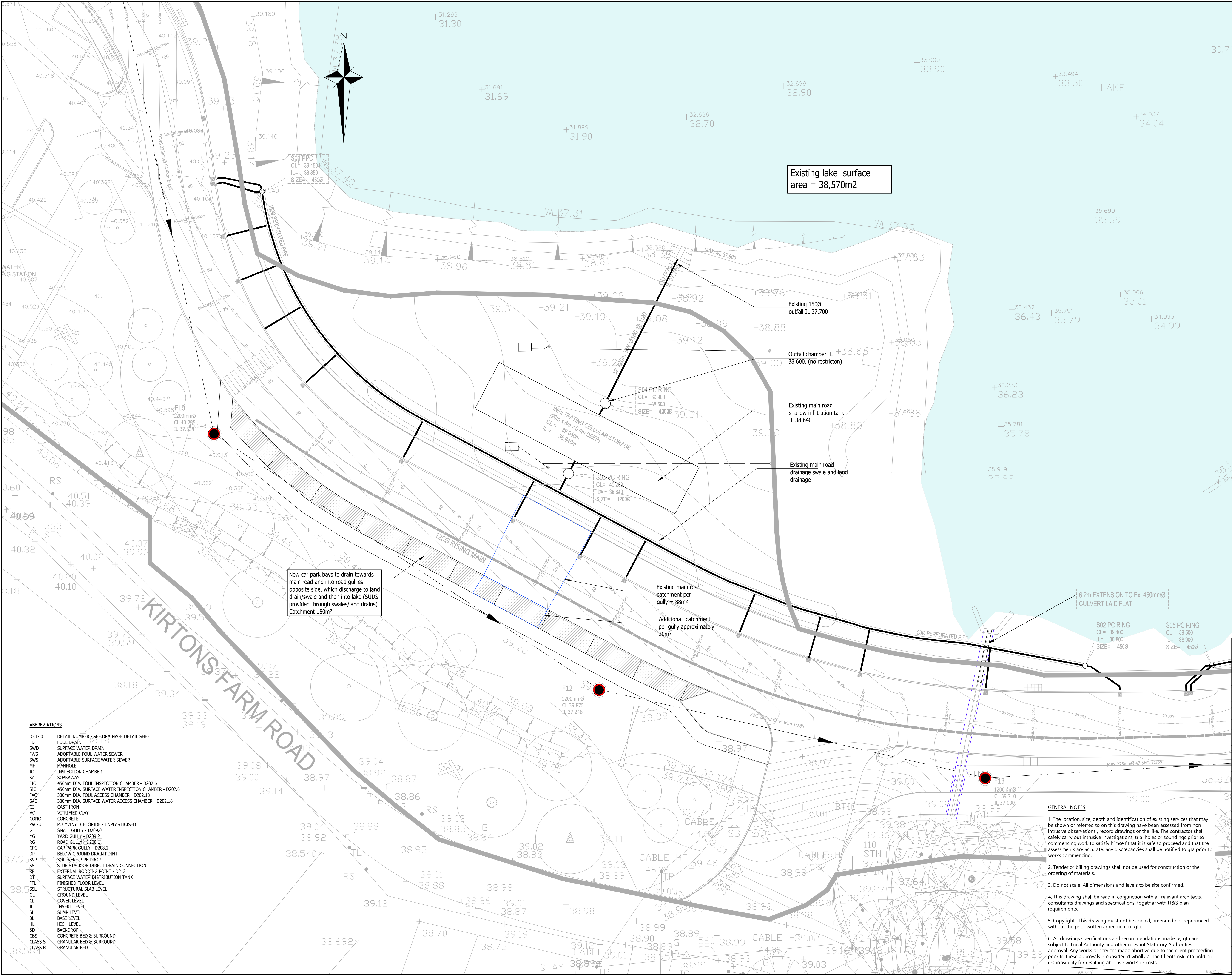
This represents a rise in lake level of less than **1 mm** during an extreme design storm, which is negligible in comparison with normal variations in lake water level. Consequently, the additional runoff from the proposed parking bays will have no material impact on the receiving waterbody, and the provision of dedicated attenuation for this small increase in impermeable area would not be proportionate. This is assuming no infiltration takes place either in the cellular tank or lake.

Conclusion

- 1.8 The proposed visitor parking bays will utilise the existing highway drainage system, with runoff directed to the existing road gullies before discharging via the established swale, attenuation/infiltration tank and overflow connection to the lake. The additional catchment area will increase the loading on each gully to approximately 108 m², which remains well below the typical maximum design catchment of 150 m² per gully.
- 1.9 Calculations demonstrate that, during a 1 in 100-year rainfall event with a 40% allowance for climate change, the additional runoff from the proposed parking bays would increase the level of the receiving lake by less than 1 mm. This negligible increase confirms that the existing drainage infrastructure has sufficient capacity to accommodate the proposed development without increasing flood risk or requiring additional surface water attenuation.

Appendix A

Drainage Strategy drawing no. G259-GTA-SW-XX-DR-C-96-1001



- GENERAL NOTES:**
1. All dimensions to be checked on site. All details and dimensions relating to sub-contractors or suppliers work must be checked and agreed between the sub-contractor or supplier and the main contractor.
 2. This drawing is to be read in conjunction with all relevant architects, services and engineers drawings and specifications.
 3. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations, record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. Any discrepancies shall be notified to gta prior to works commencing.
 4. Tender or billing drawings shall not be used for construction or the ordering of materials.
 5. Do not scale. All dimensions and levels to be site confirmed.
 6. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.

DRAINAGE CALCULATIONS:

The proposed parking bays will create an additional impermeable catchment area of approximately 150 m².

Assuming a 1 in 100-year rainfall event with a 40% allowance for climate change, equating to 150 mm of rainfall over 24 hours, the total runoff volume generated would be:

Catchment area: 150 m²
Design rainfall depth: 150 mm (0.15 m)
Runoff volume: 22.5 m³

The receiving lake has an approximate surface area of 38,570 m². If the entire runoff volume from the proposed parking bays were discharged to the lake, it would result in an increase in water level of:

22.5 m³ ÷ 38,570 m² = 0.00058 m (0.58 mm)

This represents a rise in lake level of less than 1 mm during an extreme design storm, which is negligible in comparison with normal variations in lake water level. Consequently, the additional runoff from the proposed parking bays will have no material impact on the receiving waterbody, and the provision of dedicated attenuation for this small increase in impermeable area would not be proportionate.

ABBREVIATIONS	
D307.0	DETAIL NUMBER - SEE DRAINAGE DETAIL SHEET
FD	FOUL DRAIN
SWD	SURFACE WATER DRAIN
PWS	ADOPTABLE FOUL WATER SEWER
SWS	ADOPTABLE SURFACE WATER SEWER
MH	MANHOLE
IC	INSPECTION CHAMBER
SA	SOAKAWAY
FIC	450mm DIA. FOUL INSPECTION CHAMBER - D202.6
SIC	450mm DIA. SURFACE WATER INSPECTION CHAMBER - D202.6
FAC	300mm DIA. FOUL ACCESS CHAMBER - D202.18
SAC	300mm DIA. SURFACE WATER ACCESS CHAMBER - D202.18
CI	CAST IRON
VC	VITRIFIED CLAY
CONC	CONCRETE
PNC-U	POLYVINYL CHLORIDE - UNPLASTICISED
G	SMALL GULLY - D209.0
YG	YARD GULLY - D209.2
RG	ROAD GULLY - D208.1
CPG	CAR PARK GULLY - D208.2
DP	BELOW GROUND DRAIN POINT
SVP	SOIL VENT PIPE DROP
SS	STUB STACK OR DIRECT DRAIN CONNECTION
TRP	EXTERNAL RODDING POINT - D213.1
DT	SURFACE WATER DISTRIBUTION TANK
FFL	FINISHED FLOOR LEVEL
SSL	STRUCTURAL SLAB LEVEL
SL	GROUND LEVEL
CL	COVER LEVEL
IL	INVERT LEVEL
SL	SUMP LEVEL
BL	BASE LEVEL
HL	HIGH LEVEL
BD	BACKDROP
CBS	CONCRETE BED & SURROUND
CLASS S	GRANULAR BED & SURROUND
CLASS B	GRANULAR BED

- GENERAL NOTES**
1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations, record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. Any discrepancies shall be notified to gta prior to works commencing.
 2. Tender or billing drawings shall not be used for construction or the ordering of materials.
 3. Do not scale. All dimensions and levels to be site confirmed.
 4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements.
 5. Copyright: This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.
 6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

PI	Initial issue	30.06.26	JV	MR
Rev	Amendments	Date	Dsn	Chk
Status				
PRELIMINARY				
Client				
Berkeley Designed for life				
Architect				
Project				
PHASE 6 GREEN PARK VILLAGE				
Title				
PROPOSED PARKING BAYS DRAINAGE STRATEGY				
Date		Scale @ A1	1/200	
JUNE 2026				
Clients Ref.		Project Ref.	7143	
gta Civils Consulting Engineers Gloucester House, 66a Church Walk, Burgess Hill, West Sussex, RH15 9AS Tel:01444 871444 Web: www.gtacivils.co.uk				
Drawing Number			Rev.	
G259-GTA-SW-XX-DR-C-96-1001			P01	