



4th July 2022

Our Ref: 680074-L1(00)-FRA

14, Beecham Court,
Pemberton Business Park,
Wigan,
WN3 6PR
UK

Telephone: +44 (0)1942 493255

Fax: +44 (0)1942 493171

www.rsk.co.uk

Planning Section

Dover District Council

Head Office

White Cliffs Business Park

Dover

Kent

CT16 3PJ

RE: DOV/21/01822 - Cross Road, Deal – Southern Water Consultation

I refer to the recent online consultation meeting between RSK and Southern Water on 20/06/2022, attended by Colin Whittingham of RSK, and William King and Richard Gamble of Southern Water. Southern Water had expressed initial concerns that the outline surface water drainage strategy provided in the Flood Risk Assessment 680074-R1(01)-FRA was proposing to discharge via infiltration to the ground into an area of Groundwater Source Protection Zone (GSPZ) 2 and of close proximity to GSPZ 1. It was noted during that meeting that the aquifer under the site supplied drinking water to large areas surrounding the site and a direct connection into the shallow aquifer (unconfined chalk with little/no superficial) could be detrimental should pollutants and suspended solids be mobilised directly into the aquifer. Southern Water wanted reassurances that a surface water drainage strategy would be designed to mitigate against a pollution event at both construction and post-development stages.

It was agreed that the surface water drainage strategy should ensure that all drainage passes through a number of treatments including lined permeable paving, filter strips or lined swales, an oil interceptor, pre-treatment basin/pond and through to the final infiltration basin. This does not deviate largely from the original outline drainage strategy (P2) submitted in 680074-R1(01)-FRA; however, amendments have been included to show repositioning of the hydrocarbon interceptor to take all flows from the site and a note made to confirm the use of lined permeable paving within the proposed developable area. The updated drainage strategy (P3) is included in **Appendix A**.

RSK Geosciences is to provide a high level hydrogeological assessment with proposed mitigation measures for the construction phase of the development for the current outline planning application. Southern Water will expect to receive a detailed assessment (including a Construction Environmental Management Plan) once final construction details are known and will seek to secure this through a planning condition.

I trust the information supplied above has provided you with the necessary assurances that the requirements from Southern Water can be met; however, please do not hesitate to contact the undersigned if you require any further information.



RSK Land & Development Engineering Ltd

Registered office

Spring Lodge • 172 Chester Road • Helsby • Cheshire • WA6 0AR • UK

Registered in England No. 4723837

www.rsk.co.uk



Yours sincerely,

RSK LDE LIMITED

A handwritten signature in black ink, reading 'Ryan Whitfield'. The signature is written in a cursive style with a large initial 'R'.

Ryan Whitfield

Hydrologist BSc (Hons) MSc MCIWEM

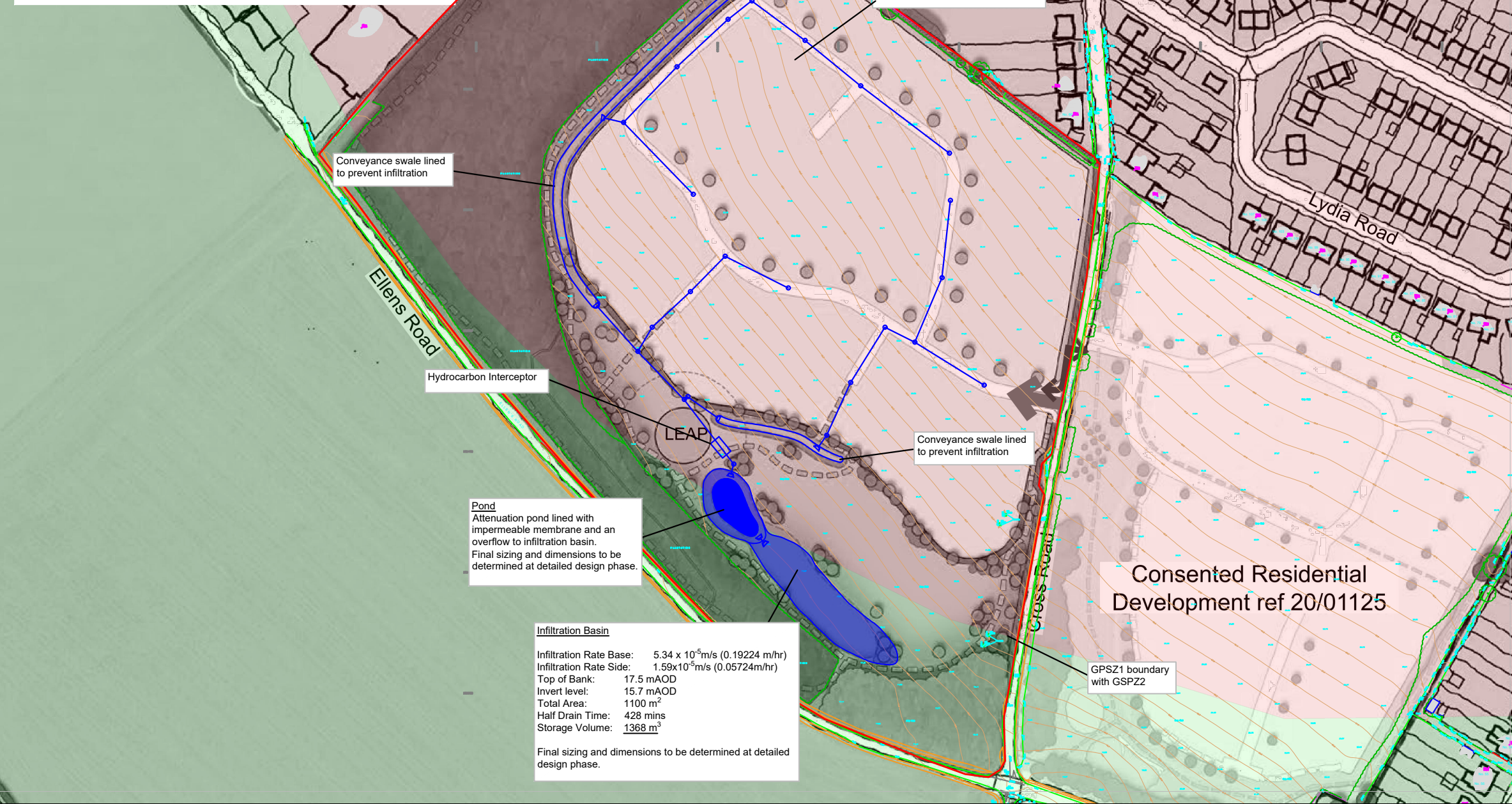


APPENDIX A UPDATED OUTLINE SURFACE WATER DRAINAGE STRATEGY

File Location: L:\1001 HYDRO JOBS LIVE\680074 - CROSS ROAD, DEAL GLADMAN\4 DRAINAGE\DRAWINGS\680126 INDICATIVE DRAINAGE STRATEGY (03).DWG

Notes	Standard Required	Required	Onsite required?	Proposed (Ha)	
Infiltration Basin has been sized based on observed infiltration rates detailed in 680074-R1(01)-FRA.			-	-	
All manholes shown are indicative, which can be revised at detailed design stage.			Yes	0.57	
All pipes shown are indicative which can be revised at detailed design stage.			Yes	0.04	
All main drainage runs to be positioned within highways or footways where possible.			-	0.073	

Swales shown are indicative for conveyance purposes and sizing should be provided at detailed design stage.
 As the detailed layout of the proposed development is not currently known, all property level drainage is assumed to connect to the main runs shown.
 Surface water pipes to be laid at minimum gradient in order to achieve self flushing velocity.
 All drainage should be designed in accordance with Sewers for Adoption 8th Edition.
 SuDS strategy outlined in Flood Risk Assessment: 680074-R1(01)-FRA
 Groundwater Source Protection Zone 1 (GSPZ1) (red underlay) and Groundwater Source Protection Zone 2 (GSPZ2) (green underlay) sourced from <https://data.gov.uk/dataset/09889a48-0439-4bbe-8f2a-87bba26fbf5/source-protection-zones-merged> giving an estimated population of 348).



Pond
 Attenuation pond lined with impermeable membrane and an overflow to infiltration basin. Final sizing and dimensions to be determined at detailed design phase.

Infiltration Basin
 Infiltration Rate Base: 5.34×10^{-5} m/s (0.19224 m/hr)
 Infiltration Rate Side: 1.59×10^{-2} m/s (0.05724 m/hr)
 Top of Bank: 17.5 mAOD
 Invert level: 15.7 mAOD
 Total Area: 1100 m²
 Half Drain Time: 428 mins
 Storage Volume: 1368 m³
 Final sizing and dimensions to be determined at detailed design phase.

Notes
 Do not scale from this drawing
 Layout provided by FPCR
 Drawing is subject to change
 Drawing is indicative and subject to change following layout revisions

Key

- Red Line Boundary
- Proposed Surface Water Network
- Proposed Swale
- Proposed Infiltration Basin
- Proposed Pond

Rev.	Date	Amendment	Drawn	Chkd.	Appd.
P3	30.06.22	Update treatment train	RW	CW	CW
P2	07.10.21	Update infiltration rates + sizes	RW	CW	CW
P1	02.08.21	Issued for Discussion	RW	KJ	CW

RSK
 LAND & DEVELOPMENT ENGINEERING LTD
 Spring Lodge
 172 Chester Road
 Helsby
 Cheshire, WA6 0AR
 United Kingdom
 Tel: +44 (0) 1928 726006
 Fax: +44 (0) 1928 725633
 Email: ide@rsk.co.uk
 Web: www.rsk.co.uk

Client
Gladman Developments Ltd

Project Title
Cross Road Deal

Status
Draft

Drawing Title
Indicative Surface Water Drainage Strategy DRAFT

Drawn	Date	Checked	Date	Approved	Date
RW	June 22	CW	June 22	CW	June 22

Scale: - Orig Size: A3 Dimensions: m

Project No. **680074** Drawing File

Drawing No. **10-01** Rev. **P3**

Consented Residential Development ref 20/01125

GSPZ1 boundary with GSPZ2