

Technical Note

Project: Llanwern

Subject: PS4/PS5 Rising Main Executive Summary

Client:	Revantage		
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I Pumping Station 4 & 5 Rising Mains

I.1 Introduction

- 1.1.1 The wider Glan Llyn, Llanwern development is located in the South of Wales on a former TATA steelworks site, within the district of Newport and is circa. 200ha of development area that includes residential housing, two primary schools, a series of sports pitches, open space parks, a local centre and a public house.
- 1.1.2 The previously approved sitewide foul water drainage strategy includes a series of pumping stations and rising mains which are required to meet the nearest viable outfall location towards the South West of the development and are required due to the very flat topography of the site.

I.2 Technical Detail

- 1.2.1 Planning submission is being sought for rising mains and associated construction works which will take the pumped outflow from Pumping Station 4 (PS4) and 5 (PS5) which serve 1655 and 1900 plots apiece to a viable outfall as agreed with Dwr Cymru Welsh Water (DCWW).
- 1.2.2 The rising mains for PS4 and 5 are approximately 1491m and 2080m in total length respectively, and for referencing purposes are split between onsite (within the development area) and offsite sections (outside of development area). It is the intention that the PS4 and PS5 rising mains are to be adopted and maintained by DCWW in the future.
- 1.2.3 Within the onsite section of works, the rising mains alignments will be within individual trenches up to the point where they meet just North West of Central Lake; which is at approximately chainage 125m on the onsite PS4 rising main and 715m on the onsite PS5 rising main. From this point, the rising main alignments will be within the same trench and at similar levels up to a

point where the offsite section begins; near the electrical substation adjacent to Queensway (approximately 200m East from the Newport Mechanical Clock roundabout) and at the Southern end of Julians Reen.

1.2.4 From this location near the electrical substation, the offsite section of the PS4 and PS5 rising main alignment continues in a single trench in a Westerly direction towards the outfall location. The outfall is situated South West of the development and just North of the Queensway Meadows / Queensway / Longditch Road / Meadows Road roundabout.

1.2.5 Please refer to the technical package of drawings for further details on these proposals.

1.3 Gas Membranes and Clean Cover Details

1.3.1 In terms of gas membranes, the rising main installation should have no impact on gas membranes as these only relate to structures (i.e. residential properties).

1.3.2 In accordance with the approved site wide Remediation Strategy (ref. 18669-RLL-21-XX-RP-O-0157 Rev FINAL (July 2022)), a 600mm clean cover system has been placed across completed parts of the Glan Llyn development. The clean cover system includes a 600mm layer chemically suitable material that has been tested to align with the requirements set out in the Remediation Strategy, on some historical phases this is underlain by a marker geotextile (but this is not present in all parts of the Site).

1.3.3 Where it is encountered during the rising main installation the clean cover material should be kept separate from the underlying deposits and stockpiled for re-instatement (i.e. kept to the opposite side of the trench to the Made Ground). Made Ground should then be used to fill the trench to final ground level -600, with the retained clean soils placed above this.

1.3.4 If there is a shortfall of clean cover material, material that aligns with the requirements of the Remediation Strategy will need to be imported to the Site. Evidence of its provenance will need to be provided (i.e. import tickets/source information).

1.3.5 The operation should be validated through photographs during the rising main installation and the thickness/material suitability should be spot checked by Rodgers Leask incrementally through the work.

1.3.6 The sitewide Remediation Strategy (July 2022) is included as part of the submission for information. A validation note can be supplied if required.