
Job name: Burger King, Barnsley

Job No: M44628

Note No: M44628-JNP-XX-XX-RP-C-1001

Date: 12/07/2024

Prepared by: Alex Gowers

Subject: Drainage Strategy Statement

1. Introduction

- 1.1 JNP Group were instructed by Burger King UK to prepare a drainage strategy to support a full planning application submission for a new restaurant building and associated external works.
- 1.2 The proposed development site is 0.23 hectares and is currently part of an asphalt surfaced car park for a Tesco Extra supermarket store.
- 1.3 JNP Group has prepared the following drawings which provide the surface water drainage strategy for the new development. This technical note should be reviewed in conjunction with the drawings.
 - M44628-JNP-90-XX-DR-C-2001 General Arrangement
 - M44628-JNP-92-XX-DR-C-2002 Private Drainage Layout
 - M44628-JNP-90-XX-DR-C-2003 Setting Out Plan
 - M44628-JNP-90-XX-DR-C-2004 Levels Layout
 - M44628-JNP-90-XX-DR-C-3001 Typical Construction Details
- 1.4 A new building will be constructed onsite. It is proposed to retain most of the access roads and existing car park and reuse the existing drainage system.
- 1.5 The development does not increase the impermeable area across the site and therefore will not increase the surface water runoff rate or increase the risk of flooding onsite or offsite.
- 1.6 The development site is constrained by existing utilities that cross the site. Therefore, the opportunity to introduce sustainable drainage systems (SuDS) is limited.
- 1.7 Whilst preparing the drainage strategy JNP Group has liaised with the Barnsley Council Planning Department who requested a drainage statement is provided, in addition to the drawings, to explain and justify the proposed drainage strategy.

2. Existing Site

- 2.1 The site is located at land north of the Tesco Extra store, Wombwell Lane, Barnsley, S70 3NS.
- 2.2 The existing site is a section of car park within the Tesco Extra main car park.

- 2.3 The existing surface consists of 100% impermeable hardstanding. The site boundary is shown in Figure 2.3 below.



Figure 2.3 Development Site Boundary

- 2.4 There is a surface water sewerage system and gullies located across the existing site. All surface water runoff from the existing site discharges into the underground sewerage system.
- 2.5 The existing sewers onsite are both adopted and private and form part of the sewerage system that serves the Tesco Extra supermarket building, car park and private access road.

3. Surface Water Drainage Hierarchy

Infiltration

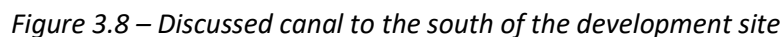
- 3.1 An assessment of the geology has been carried out using the 1:50,000 scale British Geological Survey (BGS) online GeoIndex Tool as well as to the BGS 1:50,000 Series published geological map,

Sheet 87 Barnsley.

- 3.2 The superficial geology of the site to be is indicated to be Alluvium, which is described by the BGS as “Normally soft to firm, consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. A stronger, desiccated surface zone may be present”.
- 3.3 The underlying “bedrock” geology is indicated to be strata of the Pennine Middle Coal Measures Formation which is described by the BGS as *“Interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams.”* The sandstone is described by the BGS as *“Medium strong to extremely strong medium to widely jointed thinly to thickly bedded fine to coarse-grained SANDSTONE may contain slate or mudstone and siltstone beds. Weathers to a loose to very dense sand, gravel or silty/clayey sand.”* The Mudstone is described by the BGS as *“Very weak to medium strong usually fissured MUDSTONE. Weathers to a firm to stiff silty clay”*. The solid geology is shown to dip approximately 5 degrees to the northeast.
- 3.4 An intrusive phase 2 site investigation is yet to be carried out onsite.
- 3.5 Based on the above descriptions, the superficial and bedrock geology, are unlikely to be permeable to support the use of infiltration drainage to discharge surface water directly into the ground.
- 3.6 The existing site and neighbouring properties are served by surface water sewers which indicates that infiltration drainage and soakaways are not viable.

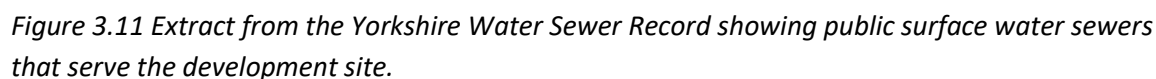
Discharge to Watercourse

- 3.7 There is a section of the former Sheffield and South Yorkshire Navigation Dearn and Dove Canal located to the west of the Tesco store and car park.
- 3.8 The canal is disused and has been filled to the south of the site as shown in Figure 3.8 below.



- ### Discharge to Surface Water Sewer

- July 24**



- #### 4. Proposed Drainage Strategy

- 4.1 The proposed development will provide a Burger King restaurant along with resurfacing a section of the car park and pedestrianising a portion of the car park.
- 4.2 The proposed development will utilise the existing surface water and foul water sewerage network.
- 4.3 All existing gullies on site to be retained will undergo remediation during construction to ensure they are in a good condition and provide suitable drainage.
- 4.4 The proposed development will consist of 100% impermeable hardstanding as existing.
- 4.5 The majority of the existing car park and access roads, within the development site boundary, will be retained and reused as car parking for the new Burger King restaurant, with no changes to the existing surface water drainage system.
- 4.6 The existing combined water sewer pipe beneath the proposed building is proposed to be diverted along the south of the building utilising 250mm diameter pipe and 1.2m internal diameter manholes.
- 4.7 Please refer to drawing M44628-JNP-92-XX-DR-C-2002 for further details.
- 4.8 We have reviewed the possibility of SuDS features such as permeable paving/tarmac however considering the extent of existing underground utilities in the site, and the frequency and type of vehicular traffic across the site, there does not appear to be any suitable, significant areas for such

features.

- 4.9 JNP Group has obtained Pre-Planning Advice from Yorkshire Water which is provided in Appendix A.
- 4.10 Yorkshire Water have stated that their main approach to surface water drainage is to the surface water hierarchy, as in Requirement H3 of the Building Regulations. We highlight the following:
- 4.10.1 This site is a refurbishment of an existing car park with 100% impermeable area, and the development will remain impermeable like existing after construction so there will be no opportunity for infiltration.
 - 4.10.2 The presence of multiple existing underground utilities also eliminates the feasibility of surface water attenuation features, as it is against good practice not to cover the services with tanks or impermeable liners that could be damaged by future maintenance works.
 - 4.10.3 Our current design is to drain the surface water using the existing network and following any remediations this will ensure the system operates effectively and extends the design life of the drainage system.
- 4.11 Yorkshire water have also advised that they would expect a 30% reduction in the existing surface water discharge. As per the points mentioned above, we do not believe this would be attainable. There is not expected to be any increase in the existing surface water discharge, and following the remediation works proposed for the existing gullies and pipes, the existing drainage network will be in a better condition following the development.

5. Conclusions

- 5.1 The proposed development site is 0.23 hectares and is currently part of an asphalt surfaced car park for a Tesco Extra supermarket store.
- 5.2 The existing surface consists of 100% impermeable hardstanding.
- 5.3 The site is served by existing adopted and private surface water sewers.
- 5.4 The majority of the existing car park and access roads, within the development site boundary, will be retained and reused as car parking for the new Burger King restaurant, with no changes to the existing surface water drainage system.
- 5.5 The new building and associated external works will discharge surface water into the existing underground surface water sewerage system.
- 5.6 It is not viable to provide SUDs features such as permeable paving/tarmac due to existing underground utilities in the site, and the frequency and type of vehicular traffic across the site.
- 5.7 The presence of multiple existing underground utilities also eliminates the feasibility of surface water attenuation features, as it is against good practice not to cover the services with tanks or impermeable liners that could be damaged by future maintenance works.
- 5.8 The proposed drainage solution for the new development will not increase surface water runoff from the site or increase flood risk onsite or offsite.

Document Issue Record

Technical Note No	Rev	Date	Prepared	Reviewed	Approved
M44628-JNP-XX-XX-RP-C-1001	P01	26/06/2024	AG	AM	AM
M44628-JNP-XX-XX-RP-C-1001	P02	12/07/2024	AG	AM	AM

List of Appendices

Appendix A Correspondence from Yorkshire Water. Pre-Planning Enquiry.

This document is for the sole use and reliance of JNP Group's client and has been prepared in accordance with the scope of the appointment of JNP Group and is subject to the terms of that appointment.

JNP Group accepts no liability for any use of this document other than by its client and only for the purposes for which it has been prepared.

No person other than the client may copy (in whole or in part) or use the contents of this document, without the prior written permission of JNP Group.

Any advice, opinions or recommendations within this document should be read and relied upon only in the context of this document as a whole.

Any comments given within this report are based on the understanding that the proposed works to be undertaken will be as described in the introduction. The information referred to and provided by others and will be assumed to be correct and will not have been checked by JNP Group, JNP Group will not accept any liability or responsibility for any inaccuracy in such information.

Any deviation from the recommendations or conclusions contained in this report should be referred to JNP Group in writing for comment and JNP Group reserve the right to reconsider their recommendations and conclusions contained within. JNP Group will not accept any liability or responsibility for any changes or deviations from the recommendations noted in this report without prior consultation and our full approval.

Appendix A



YorkshireWater

**Portobello House
Portobello Way
Warwick
CV34 5GJ
alex.gowers@jnpgroup.co.uk**

**Yorkshire Water Services
Developer Services
Pre-Development Team
PO BOX 52
Bradford
BD3 7AY**

Tel: 0345 120 8482

Fax:

Email:

**technical.sewerage@yorkshirewater.co.
uk**

**Your Ref:
Our Ref: A002717**

**For telephone enquiries ring:
George Mullaney on 0345 120 8482**

14th June 2024

Dear Mr Gowers,

Burger King Barnsley, Tesco Extra Carpark, Wombwell Lane, Barnsley, S70 3NS – Pre-planning Enquiry V520002

Thank you for your recent enquiry and remittance. Our official VAT receipt has been sent to you under separate cover. Please find enclosed a complimentary extract from the Statutory Sewer Map which indicates the recorded position of the public sewers. Please note that as of October 2011 and the private to public sewer transfer, there are many uncharted Yorkshire Water assets currently not shown on our records.

The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site and are valid for a maximum period of twelve months:

Existing Infrastructure

There is a 600mm diameter public surface water sewer recorded crossing the site. No buildings, or other obstructions, are to be erected within 3.5 (three point five) metres is required at each side of the sewer centre-line, no trees planted within 5 (five) metres of this public sewer. It may not be acceptable to raise or lower ground levels over the sewer, nor to restrict access to the manholes on the sewer. If you wish to have this sewer diverted under Section 185 of the Water Industry Act 1991 an application should be made in writing. To discuss this matter, please telephone 0345 120 84 82.



There is a 225mm diameter public combined sewer recorded on the site. In this instance, building-over may take place under the control of Part H4 Building Regulations 2010. No trees planted within 5 (five) metres of this public sewer. It may not be acceptable to raise or lower ground levels over the sewer, nor to restrict access to the manholes on the sewer. If you wish to have this sewer diverted under Section 185 of the Water Industry Act 1991 an application should be made in writing. To discuss this matter, please telephone 0345 120 84 82.

Foul Water

Development of the site should take place with separate systems for foul and surface water drainage. The separate systems should extend to the points of discharge to be agreed.

Foul water domestic waste can discharge to the 225 mm diameter public combined sewer recorded crossing the site.

Foul water from kitchens and/or food preparation areas of any restaurants and/or canteens etc. must pass through a fat and grease trap of adequate design before any discharge to the public sewer network.

Surface Water

The developer's attention is drawn to Requirement H3 of the Building Regulations 2010. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SuDS), for example the use of soakaways and/or permeable hardstanding etc, may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SuDS in this instance from the appropriate authorities.

If other methods of surface water disposal are not viable and subject to providing satisfactory evidence as to why they have been discounted, curtilage surface water discharges to the public sewer will be restricted to the level of run-off - i.e. same rate of discharge - to that from the existing use of the site less a 30% reduction in the existing discharge. Any discharge of surface water from the site should discharge to similar points of connection to that of the existing use of the site. You will need to demonstrate positive drainage, based on a 1 in 1 year storm, to the public sewer to Yorkshire Water by means of investigation and calculation carried out at your expense.

To do this, Yorkshire Water requires to see existing drainage layouts with pipe sizes, gradients, gullies, downpipes and connection points, measured impermeable areas of the present use of the site, along with the calculations that show the existing and proposed



discharge rate from the site to the public sewer.

Please note further restrictions on surface water disposal from the site may be imposed by other parties. You are strongly advised to seek advice/comments from the Environment Agency/Land Drainage Authority/Internal Drainage Board, with regard to surface water disposal from the site.

Surface water run-off from communal parking (greater than 800 sq metres or more than 50 car parking spaces) and hardstanding must pass through an oil, petrol and grit interceptor/separator of adequate design before any discharge to the public sewer network. Roof water should not pass through the interceptor/separator. It is good drainage practice for any interceptor/separator to be located upstream of any on-site balancing, storage or other means of flow attenuation that may be required.

Other Observations

Any new connection to an existing public sewer will require the prior approval of Yorkshire Water. You may apply online or obtain an application form from our website (www.yorkshirewater.com/developers/sewerage/sewerage-connections/) or by telephoning 0345 120 84 82.

Under the provisions of section 111 of the Water Industry Act 1991 it is unlawful to pass into any public sewer (or into any drain or private sewer communicating with the public sewer network) any items likely to cause damage to the public sewer network or interfere with the free flow of its contents or affect the treatment and disposal of its contents. Amongst other things this includes fat, oil, nappies, bandages, syringes, medicines, sanitary towels and incontinence pants. Contravention of the provisions of section 111 is a criminal offence.

Prospectively adoptable sewers and pumping stations must be designed and constructed in accordance with the Code for Adoption, pursuant to an agreement under Section 104 of the Water Industry Act 1991. We are happy to offer pre-development technical advice on any prospective sites that you would like to put forward for adoption, prior to submission of your adoption application.

An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our Sewer Adoption, Diversion and Requisition (telephone 0345 120 84 82) or email technical.sewerage@yorkshirewater.co.uk or visit - <https://www.yorkshirewater.com/developers/sewerage/sewer-adoptions/> for further information.

All the above comments are based upon the information and records available at the present time and are valid for a period of 12 months. The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level

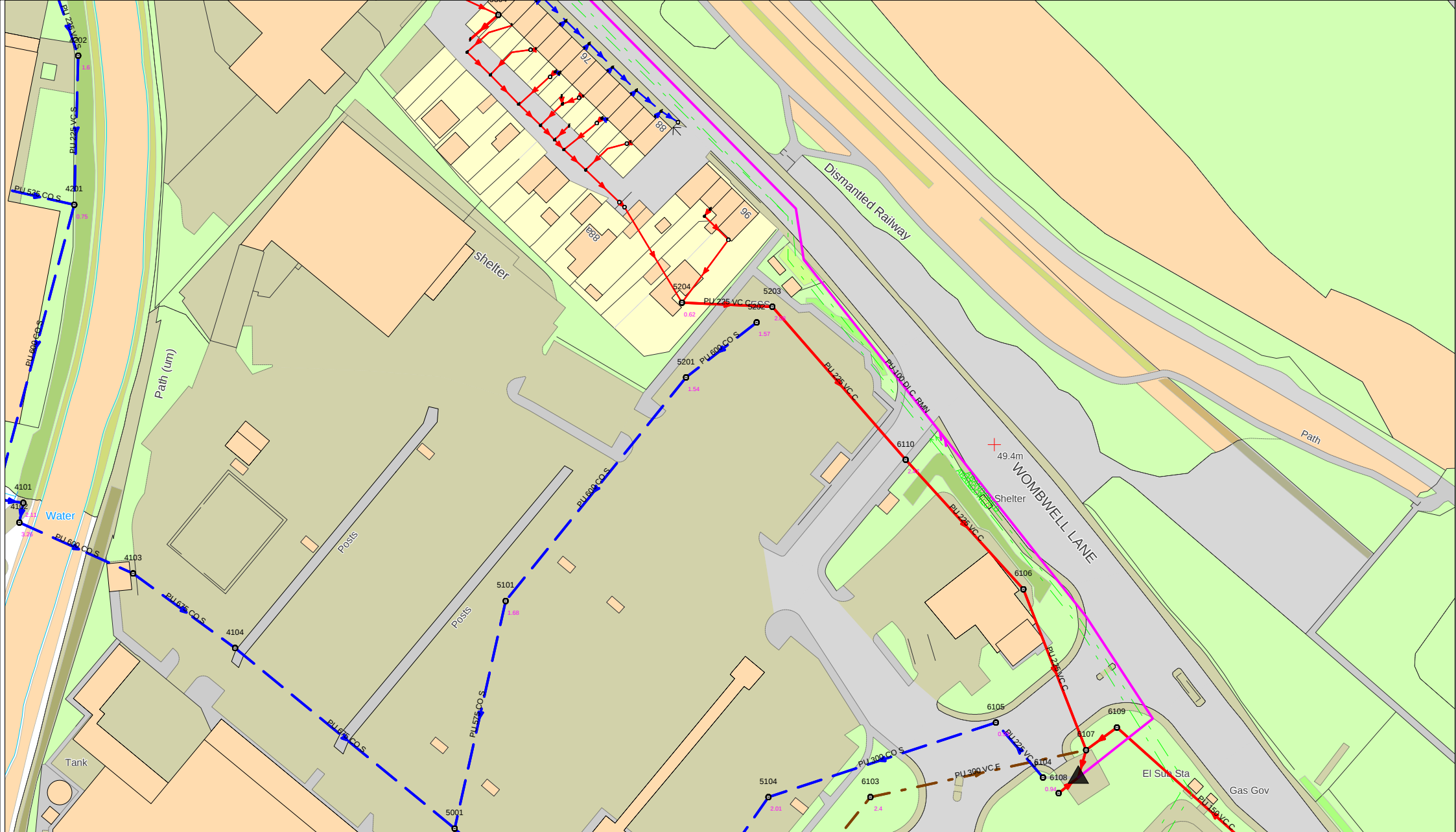


YorkshireWater

of any public sewers affecting your proposals before the commencement of any design work.

Yours sincerely

George Mullaney
Development Control Technician



437510 : 405155		Map Name : SE3705SW	Title	Partial Key		This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown.
 Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : G Mullaney Contact Tel :			Notes (Ody) COPYRIGHT STATEMENTS: Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown copyright and database 2014. All rights reserved Ordnance Survey Licence number 100022432	Foul Sewer = F Combined Sewer = C Surface Water Sewer = SW Trade Sewer = TD Partially Separate = PS	Date Req : 14/06/2024, 13:56:36 Date Gen : 14/06/2024, 13:57:07	
				Source : Sewer Network Enquiry		