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Developer Services
Southern Water
Southern House
Sparrowgrove
Otterbourne
Hampshire
SO21 2SW

Tel: **0330 303 0119**
Email: **developerservices@southernwater.co.uk**

Your Ref:

Our Ref:
CC/002068

Date:
08 April 2014

F.A.O: Ms. Linzie Brown,

Site: Padnell Grange, Cowplain, Hampshire, PO8 8ED

Dear Sirs,

Further to your recent application for a level 2 enquiry regarding the above development site.

FOUL WATER AND SURFACE WATER

Please find enclosed the report which details the extent of works required in order for your proposed development site to be accommodated within the local sewerage infrastructure. It should be noted that the report is only a hydraulic solution to provide capacity for the proposed development site. There are other options available to you/ your client in discharging your proposed flows from the site such as making a connection application/requisition to a sewer at a point where capacity is currently available. Section 98 of the Water Industry Act 1991 provides a legal mechanism through which the appropriate infrastructure can be requested (by the developer) and provided to drain a specific location.

As you are aware the owner or occupier of the premises or private sewer or drain must give the sewerage undertaker notice of the proposed works. Upon receipt of the notice the undertaker may, within 21 days, refuse to allow him to make the connection if it considers that the mode of construction or the condition of the connecting sewer or drain either does not satisfy the standards reasonably required by the undertaker, or is such that the making of the communication would be prejudicial to its sewerage system.

The right of refusal is limited to these criteria alone and the undertaker cannot refuse to allow the connection on the grounds that the sewerage system is inadequate to take the extra liquid that the connection will discharge into it. This is a matter that should be dealt with at the planning stage.

Yours faithfully

Developer Services

Please note: -

The information provided above does not grant approval for any designs/drawings submitted for the capacity analysis. The results quoted above are only valid for 12 months from the date of issue of this letter.

Site Name	Land at Padnell Grange, Couplain, Hampshire.	
Our Ref:	SWS.CC.002068 (1008585)	Date: 07/04/2014
Property Numbers	Number of properties on proposed development	80
Preferred point of connection	Foul	SU69117201
	Surface water	SU69117251
		SU69118250
Wastewater Discharge Rate	Wastewater discharge from residential properties	3.7 l/s
	Wastewater discharge from commercial or industrial processes	-
	Total Wastewater discharge	3.7 l/s

Surface water Discharge Rate	Surface water discharge from residential properties	3.5 l/s
	Surface water discharge from commercial or industrial processes	-
	Total Surface water discharge	3.5 l/s

Results		
Wastewater Capacity Assessment	Is capacity available at your preferred connection point for the entire discharge rate?	No
	Is capacity available at your preferred connection point for 50% of the entire discharge rate?	No
	Is capacity available at your preferred connection point for 20% of the entire discharge rate?	No
The nearest point on the wastewater network at which capacity exists for the entire demand is...		Budds Farm Havant WTW
Distance to and direction of the nearest point of available capacity:		5.4 km South

Results		
Surface water Capacity Assessment	Is capacity available at manhole reference SU69117251 or SU69118250 for the entire discharge rate?	No
	Is capacity available at manhole reference SU69117251 or SU69118250 for 50% of the entire discharge rate?	No
	Is capacity available at manhole reference SU69117251 or SU69118250 for 20% of the entire discharge rate?	Yes
The nearest point on the surface water network at which capacity exists for the entire demand is...		SU69106551
Distance to and direction of the nearest point of available capacity:		530 meters south

This hydraulic analysis has been carried out based on the information contained within your application and in accordance with the terms and conditions specified in Southern Water's capacity check application form and guidance notes.

Notes:

- 1 The results of capacity checks are for information only and are neither an acceptance nor rejection of your proposal.
- 2 The results given above are only valid for 12 months from the date of issue of this letter.

Job No	SWS.CC.002068 (1008585)
Author	Shreya Purandara
Checked	Prakash Thammadihalli
Reviewed	Alex Ludbrook

**Study into the Options for Foul Drainage Provision along Padnell Road and
Surface Water Drainage Provision along Padnell Road and Cherry Tree
Avenue, Budds Farm.**

Table 1 – Development Details

Proposed Development Flow l/s		Proposed Connection Manhole	Location
Foul water	3.7	SU69117201	Padnell Road
Surface Water	3.5	SU69117251	Padnell Road
		SU69118250	Cherry Tree Avenue
Commercial Flow	-	-	-

Figure 1 - Proposed Development

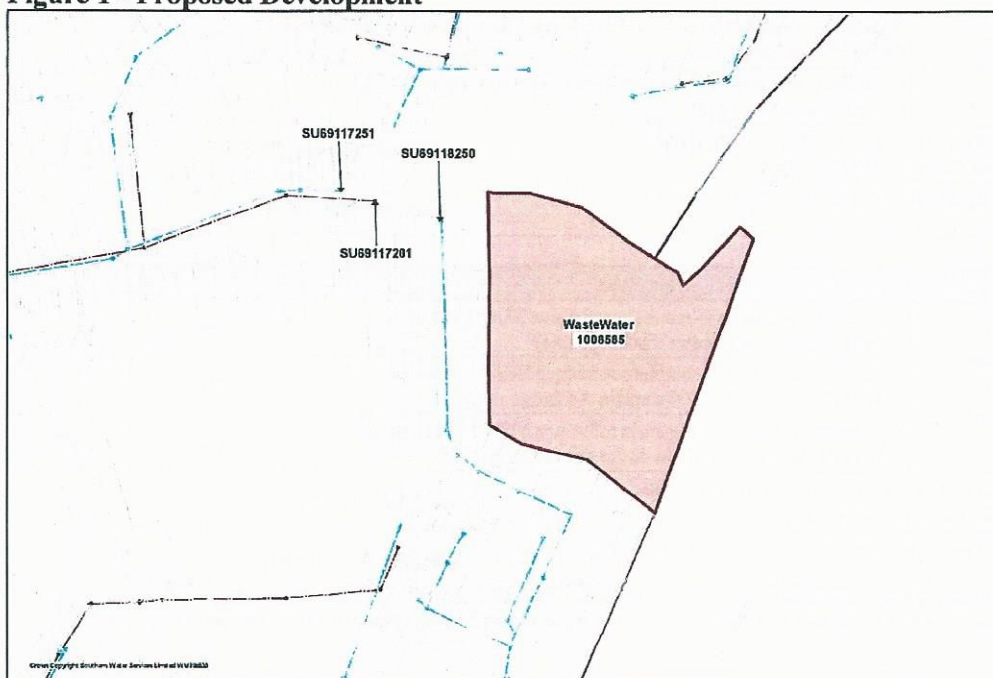


Figure 2 - Proposed Improvements – Foul system

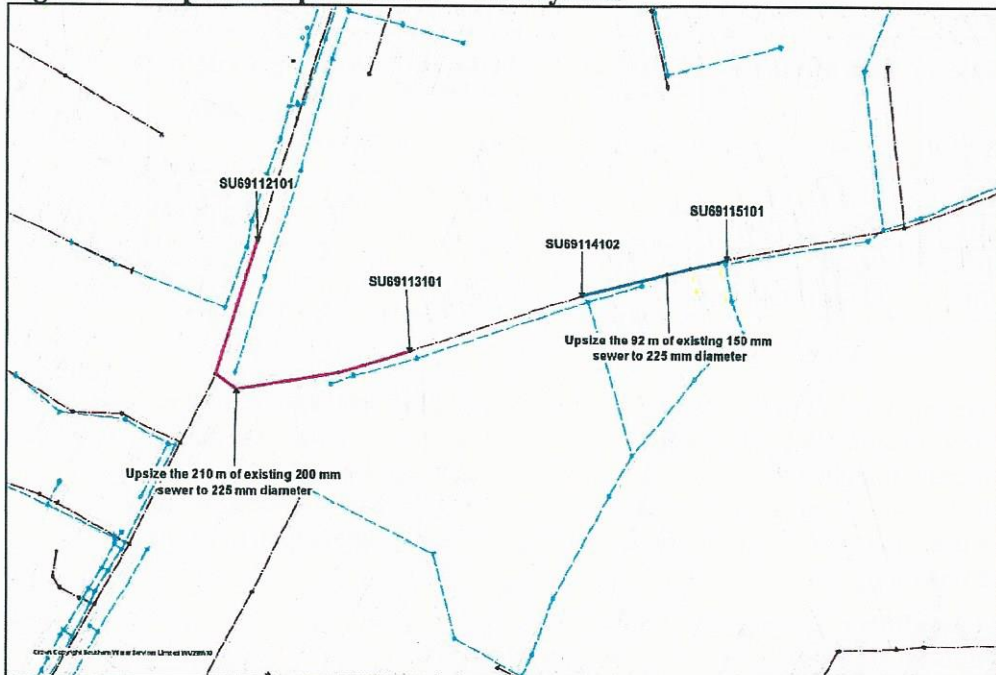


Figure 3 - Proposed Improvements – Foul system

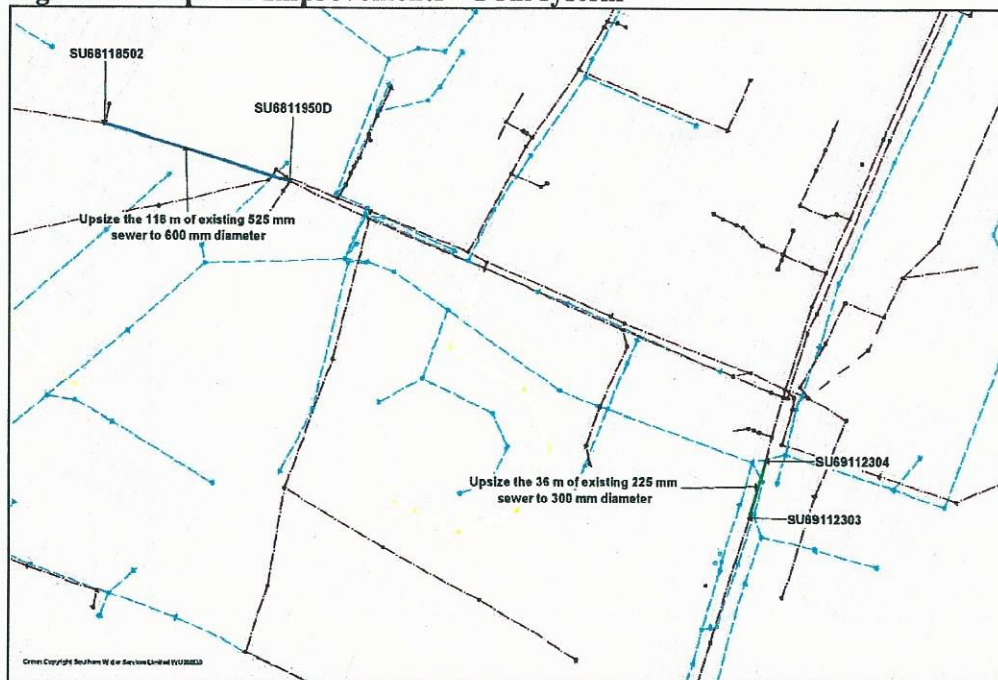


Table 2 Proposed Improvements Schedule

U/S Manhole	D/S Manhole	Sewer Diameter (mm)		Avg. Depth (m)	Length (m)
		Existing	Proposed		
SU69115101	SU69114102	150	225	2.1	92
SU69113101	SU69112101	200	225	4	210
SU69112303	SU69112304	225	300	2.7	36
SU6811950D	SU68118502	525	600	3.9	118

Note –

There is a discrepancy between the Asset data and the modelled database. The sewer diameter between manhole's SU69112303 – SU69112304 is referred as 200 mm in Asset data whereas modelled as 225 mm in modelled database. The data within the hydraulic model has been used for the purpose of this investigation. It is recommended that the sewer layout is confirmed prior to further development of the recommended scheme.

Option 1 – At manhole reference SU69117251

Figure 4 - Proposed Improvements – Surface water system

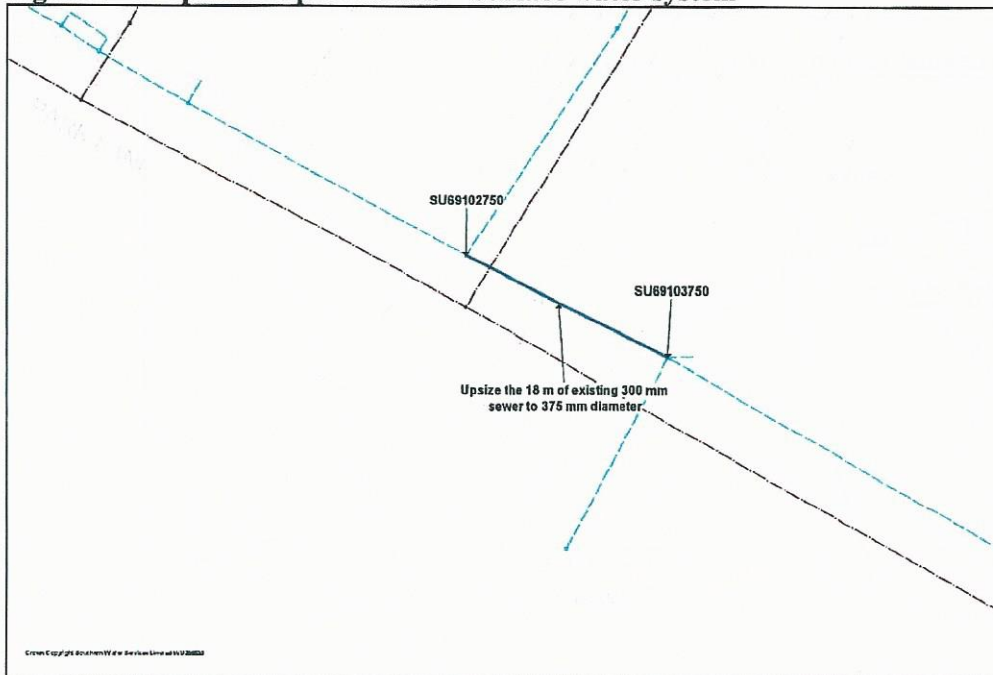


Table 3 Proposed Improvements Schedule

U/S Manhole	D/S Manhole	Sewer Diameter (mm)		Avg. Depth (m)	Length (m)
		Existing	Proposed		
SU69102750	SU69103750	300	375	1.1	18

Option 2 – At manhole reference SU69118250

Figure 5 - Proposed Improvements – Surface water system

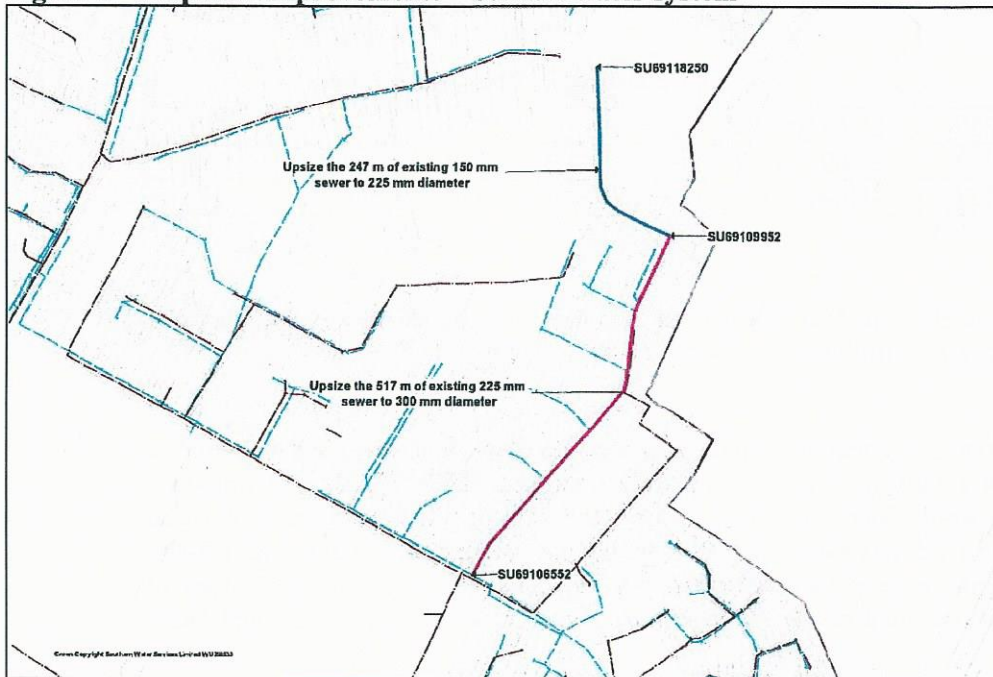


Figure 6 - Proposed Improvements – Surface water system

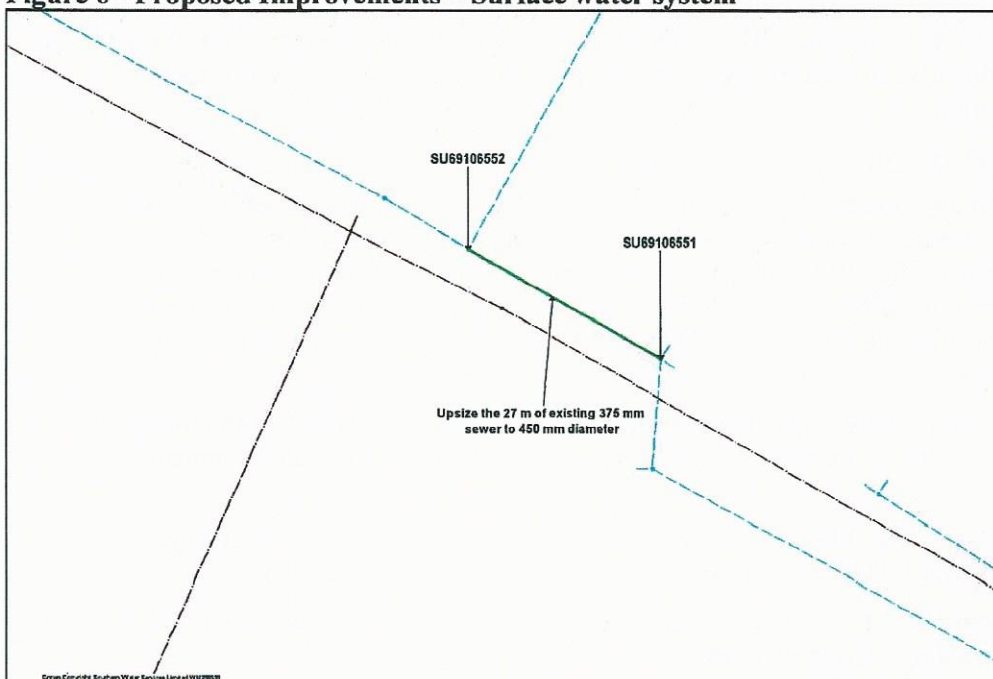


Table 4 Proposed Improvements Schedule

U/S Manhole	D/S Manhole	Sewer Diameter (mm)		Avg. Depth (m)	Length (m)
		Existing	Proposed		
SU69118250	SU69109952	150	225	2.2	247
SU69109952	SU69106552	225	300	1.7	517
SU69106552	SU69106551	375	450	0.9	27

Conclusion

We have completed the foul sewer capacity check for the above development site and the results are as follows:

Foul Water

There is currently inadequate capacity within the local foul sewerage network to accommodate a flow of 3.7 l/s at manhole reference SU69117201. The proposed development would increase flows to the local network and as a result existing properties and land may be subject to a greater risk of flooding. Additional off-site sewers or improvements to existing sewers will be required to provide sufficient capacity to service the proposed development as indicated in Figure 2, & 3 and Table 2.

The nearest point where capacity is currently available is at Budds Farm Havant WTW located approximately 5.4 km south of the proposed development site. Section 98 of the Water Industry Act 1991 provides a legal mechanism through which the appropriate infrastructure can be requested (by the developer) and provided to drain a specific location.

Surface Water System

There is currently inadequate capacity in the local surface water network to accommodate a surface water flow of 3.5 l/s at manhole reference SU69117251 or manhole reference SU69118250. Additional off-site sewers or improvements to existing sewers will be required to provide sufficient capacity to service the proposed development as indicated in Option 1 (Figure 4 and Table 3) and Option 2 (Figure 5 & 6 and Table 4).

The nearest point where capacity is currently available is at manhole reference SU69106551 located approximately 530 meters south of the proposed development site.

The surface water should be disposed of using alternative means such as soakways, or any local drainage watercourses, subject to all interested parties approval.

Before any connections are made, an application form needs to be completed and approved by Southern Water Services.

Please note: - The information provided above does not grant approval for any designs /drawings submitted for the capacity analysis. The results quoted above are only valid for 12 months from the date of issue of this letter.



STUDY INTO THE OPTIONS FOR
FOUL DRAINAGE PROVISION AT
PADNELL GRANGE
COWPLAIN
HAMPSHIRE
PO8 8ED

08 April 2014

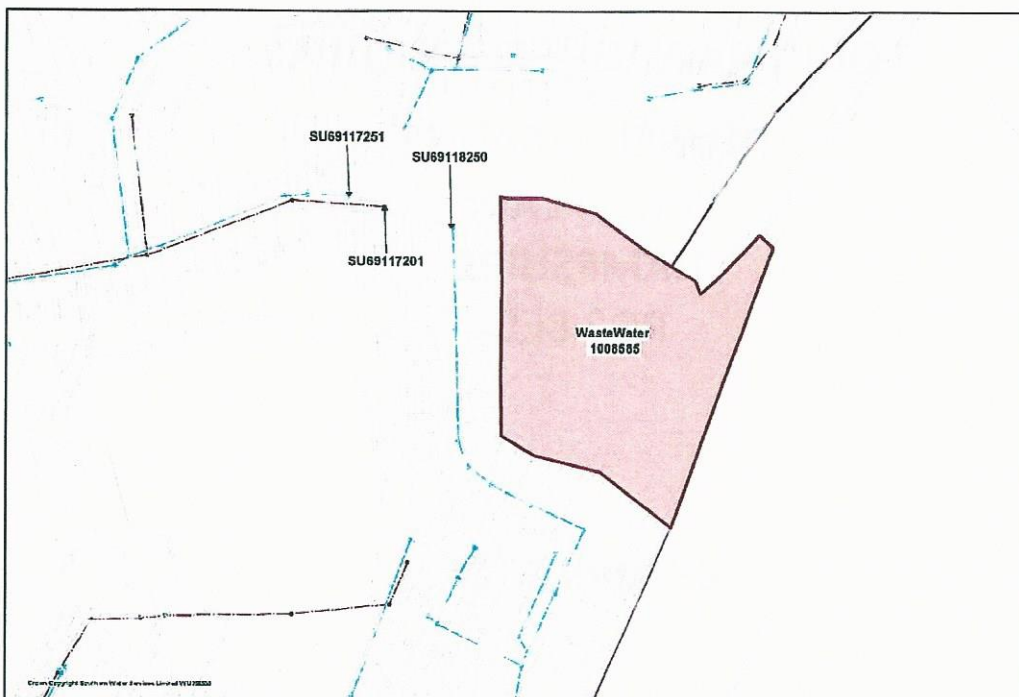
REQUESTED:
ATKINS GLOBAL

Study into the Options for Foul Drainage Provision along Padnell Road and Surface Water Drainage Provision along Padnell Road and Cherry Tree Avenue, Budds Farm

I. Development Details:

The proposal is to discharge 3.7 l/s of foul flow to the local foul sewerage systems at manhole reference SU69117201 which is located in Padnell Road and surface flow of 3.5 l/s at manhole reference SU69117251 or SU69118250 which is located in Padnell Road and Cherry Tree Avenue respectively.

Figure 1 - Proposed Development



II. Results and Conclusions:

Foul Water:

There is currently inadequate capacity within the local foul sewerage network to accommodate a flow of 3.7 l/s at manhole reference SU69117201. The proposed development would increase flows to the local network and as a result existing properties and land may be subject to a greater risk of flooding.

Additional off-site sewers or improvements to existing sewers will be required to provide sufficient capacity to service the proposed development as indicated in Figure 2 & 3 and Table 1.

Alternatively, the nearest point where capacity is currently available is at Budds Farm Havant WTW located approximately 5400 metres south of the proposed development site. Section 98 of the Water Industry Act 1991 provides a legal mechanism through which the appropriate infrastructure can be requested (by the developer) and provided to drain a specific location.

Study into the Options for Foul Drainage Provision along Padnell Road and Surface Water Drainage Provision along Padnell Road and Cherry Tree Avenue, Budds Farm

Surface Water System:

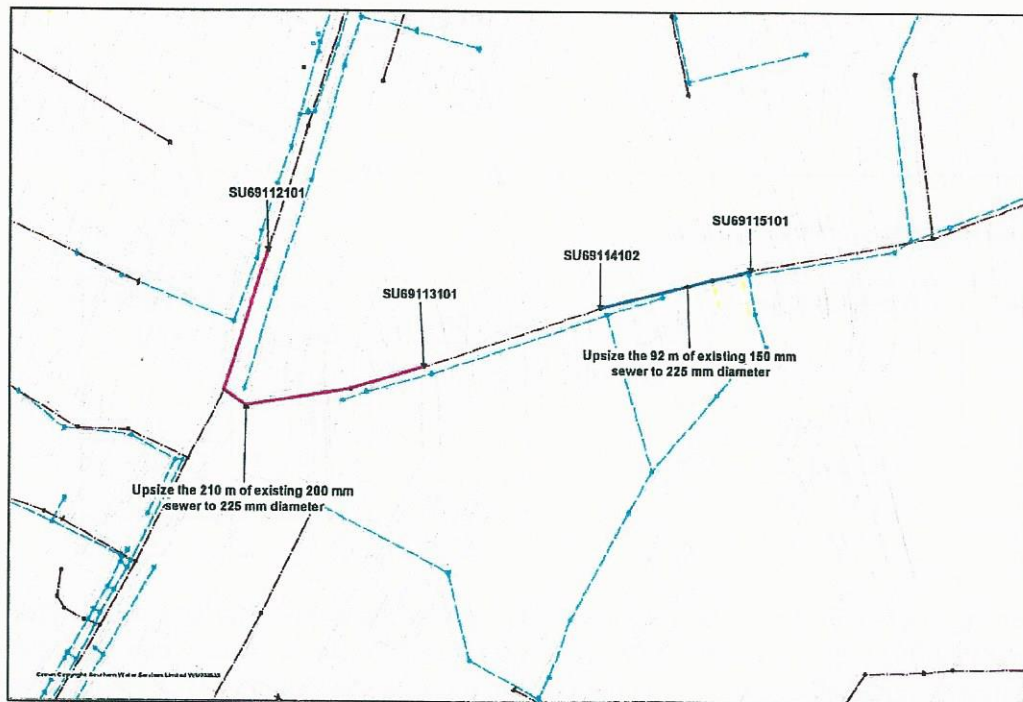
There is currently inadequate capacity in the local surface water network to accommodate a surface water flow of 3.5 l/s at of manhole reference SU69117251 or SU69118250.

Additional off-site sewers or improvements to existing sewers will be required to provide sufficient capacity to service the proposed development as indicated in Option 1 (Figure 4 and Table 2) and Option 2 (Figure 5 - 6 and Table 3).

The nearest point where capacity is currently available is at manhole reference SU69106551 located approximately 530 meters south of the proposed development site.

The surface water should be disposed of using alternative means such as soakways, or any local drainage watercourses, subject to all interested parties approval.

Figure 2- Proposed Improvements – Foul system



Study into the Options for Foul Drainage Provision along Padnell Road and Surface Water Drainage Provision along Padnell Road and Cherry Tree Avenue, Budds Farm

Figure 3- Proposed Improvements – Foul system

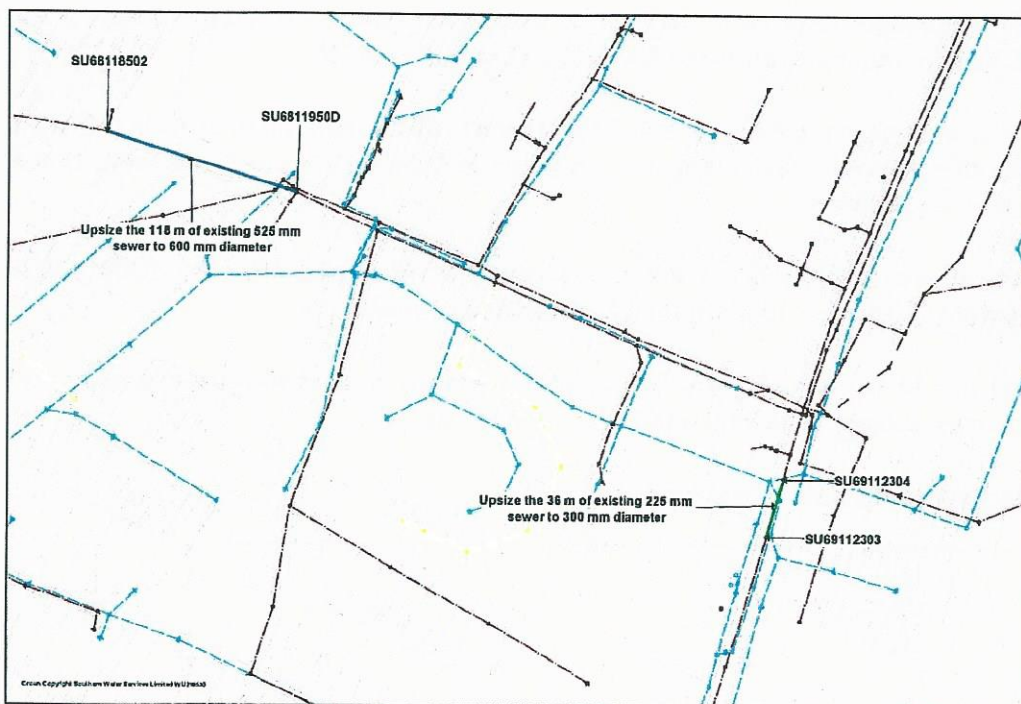


Table 1 - Proposed Improvements Schedule

U/S Manhole	D/S Manhole	Sewer Diameter (mm)		Avg. Depth (m)	Length (m)
		Existing	Proposed		
SU69115101	SU69114102	150	225	2.1	92
SU69113101	SU69112101	200	225	4	210
SU69112303	SU69112304	225	300	2.7	36
SU6811950D	SU68118502	525	600	3.9	118

Note –

There is a discrepancy between the Asset data and the modelled database. The sewer diameter between manhole's SU69112303 – SU69112304 is referred as 200 mm in Asset data whereas modelled as 225 mm in modelled database. The data within the hydraulic model has been used for the purpose of this investigation. It is recommended that the sewer layout is confirmed prior to further development of the recommended scheme.

Study into the Options for Foul Drainage Provision along Padnell Road and Surface Water Drainage Provision along Padnell Road and Cherry Tree Avenue, Budds Farm

Option 1 – At manhole reference SU69117251

Figure 4- Proposed Improvements – Surface water system

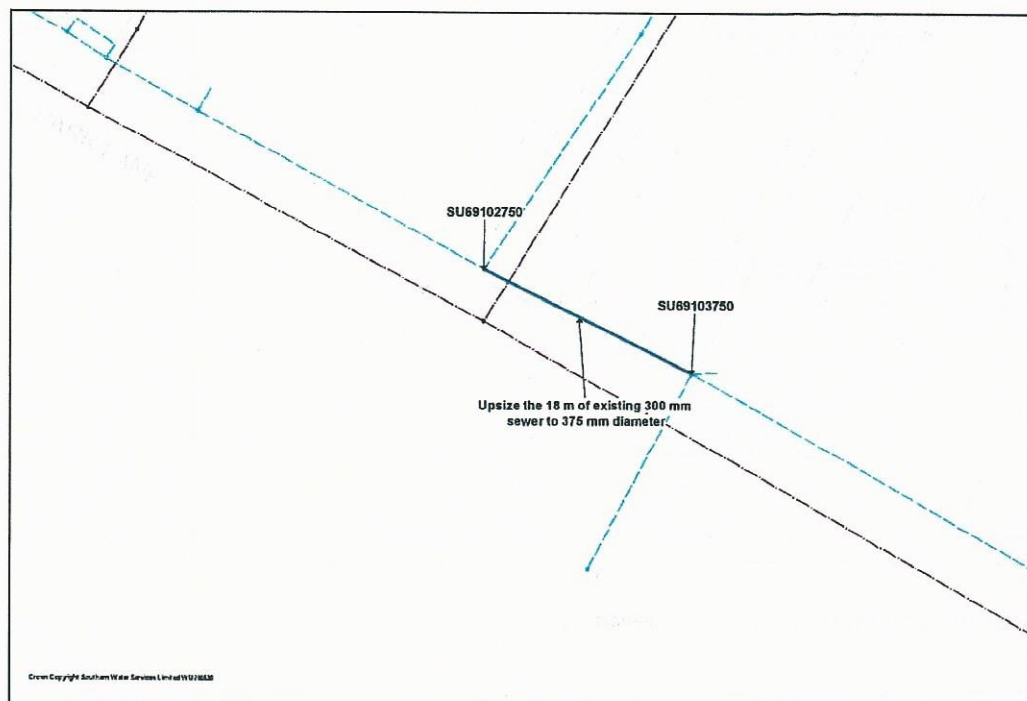


Table 2 - Proposed Improvements Schedule

U/S Manhole	D/S Manhole	Sewer Diameter (mm)		Avg. Depth (m)	Length (m)
		Existing	Proposed		
SU69102750	SU69103750	300	375	1.1	18

Study into the Options for Foul Drainage Provision along Padnell Road and Surface Water Drainage Provision along Padnell Road and Cherry Tree Avenue, Budds Farm

Option 2 – At manhole reference SU69118250

Figure 5- Proposed Improvements – Surface water system

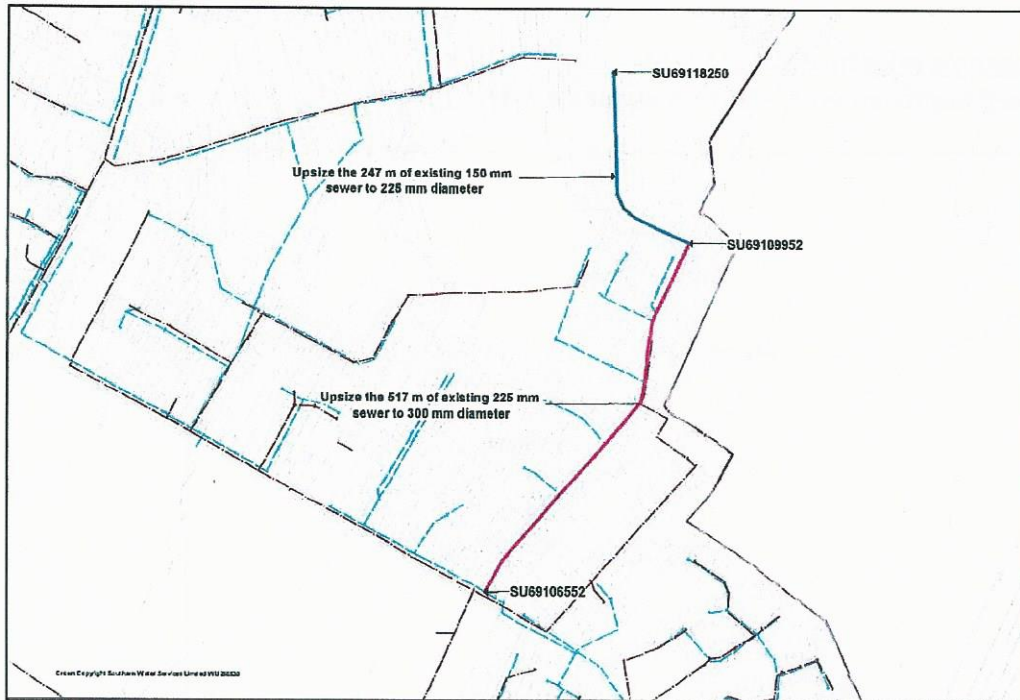
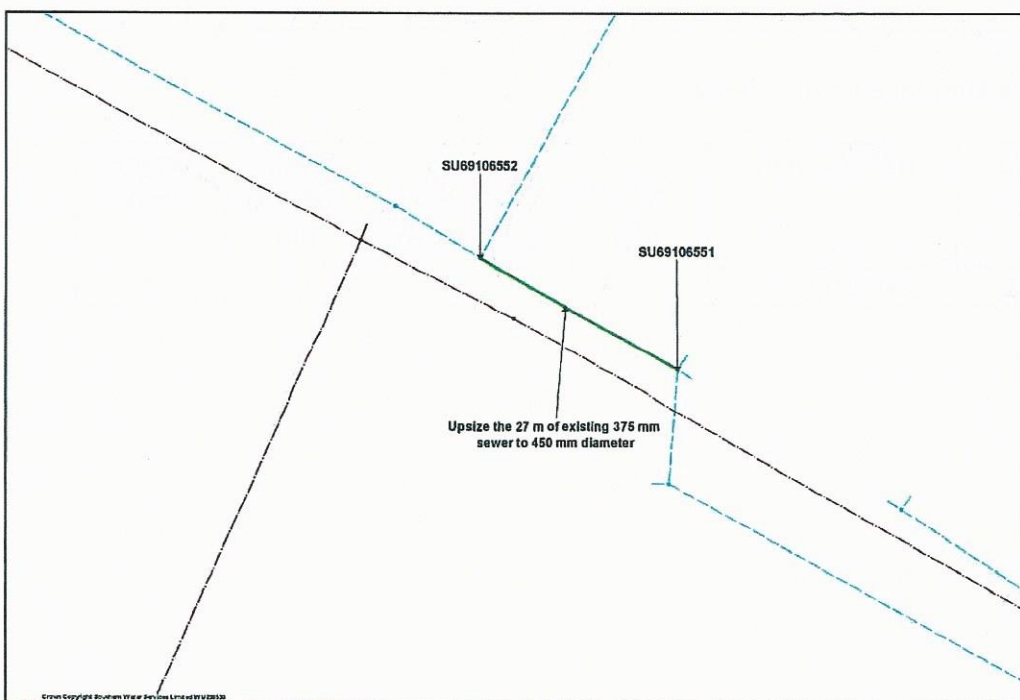


Figure 6- Proposed Improvements – Surface water system



Study into the Options for Foul Drainage Provision along Padnell Road and Surface Water Drainage Provision along Padnell Road and Cherry Tree Avenue, Budds Farm

Table 3 - Proposed Improvements Schedule

U/S Manhole	D/S Manhole	Sewer Diameter (mm)		Avg. Depth (m)	Length (m)
		Existing	Proposed		
SU69118250	SU69109952	150	225	2.2	247
SU69109952	SU69106552	225	300	1.7	517
SU69106552	SU69106551	375	450	0.9	27

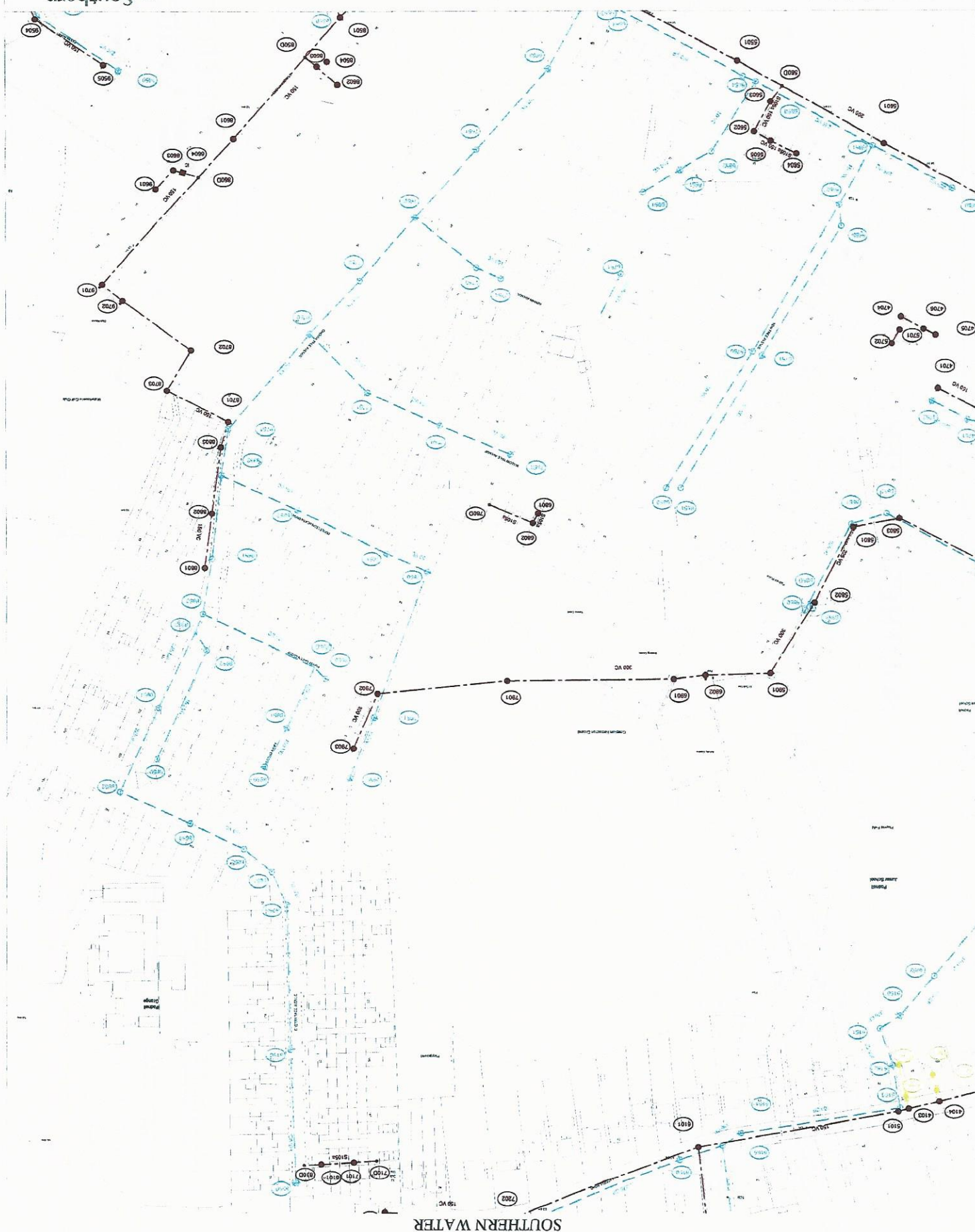
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PUBLIC SEWER RECORD

Date: 8-4-2014



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WARNING: BAC pipes are constructed of Bonded Asbestos Cement

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement

Screen Print



Southern Water

SOUTHERN WATER



The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site.

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O.S. REF: SU6910NW

Scale: 1:1250

Sewer Plot

WARNING: BAC pipes are constructed of Bonded Asbestos Cement

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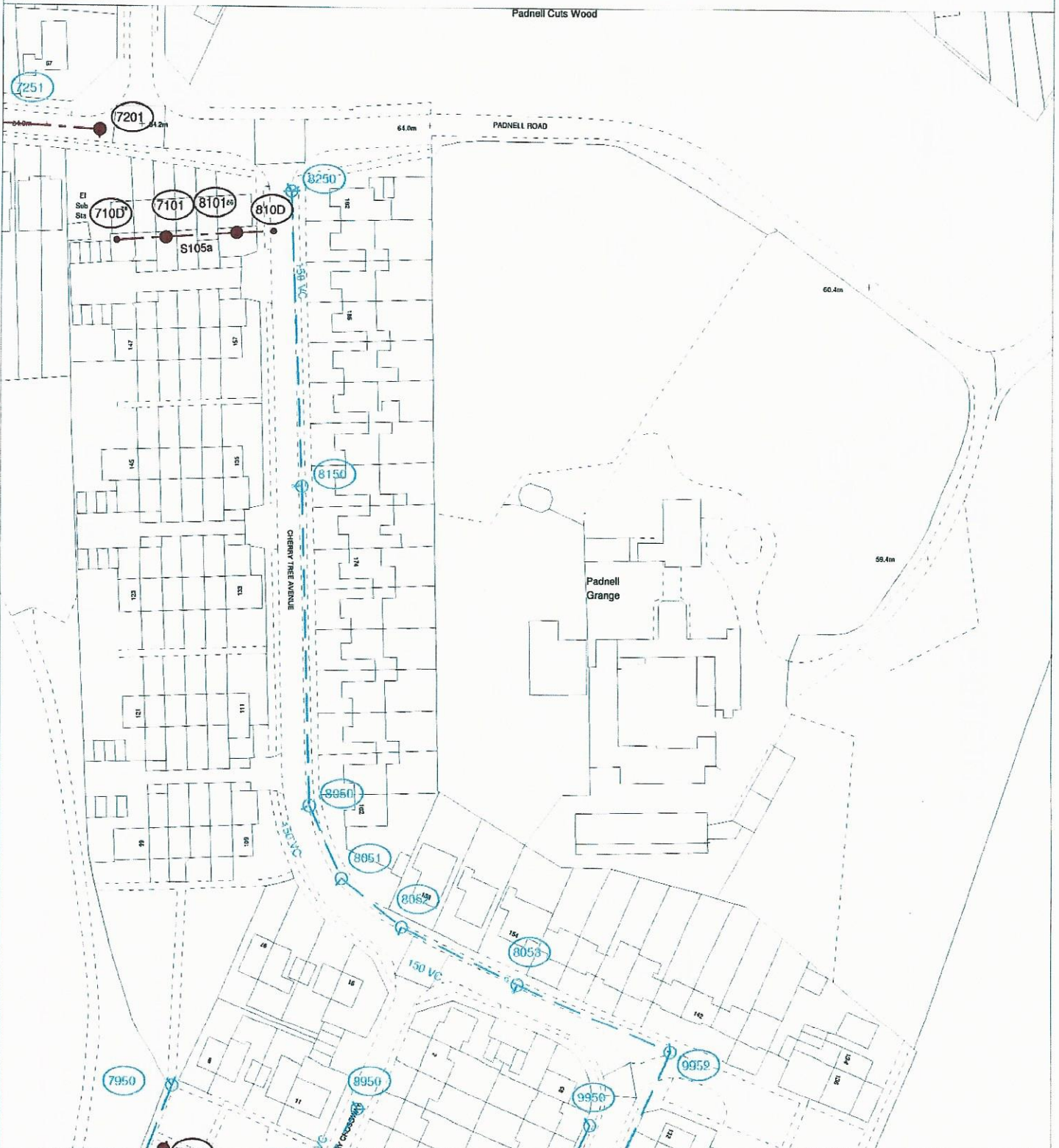
Improvements

Requested By:

Date: 8-4-2014

SOUTHERN WATER

Padnell Cuts Wood



The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site.

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O.S. REF: SU6911SE

Scale: 1:1250

Sewer Plot

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Printed By: Roopa

Date: 13-3-2014

Site Location Plan

Requested By:

SOUTHERN WATER



Date: 8-4-2014

Printed By: Gouri
Improvements
Requested By:

Scale: 1:1250

O.S. REF: SU8911SW

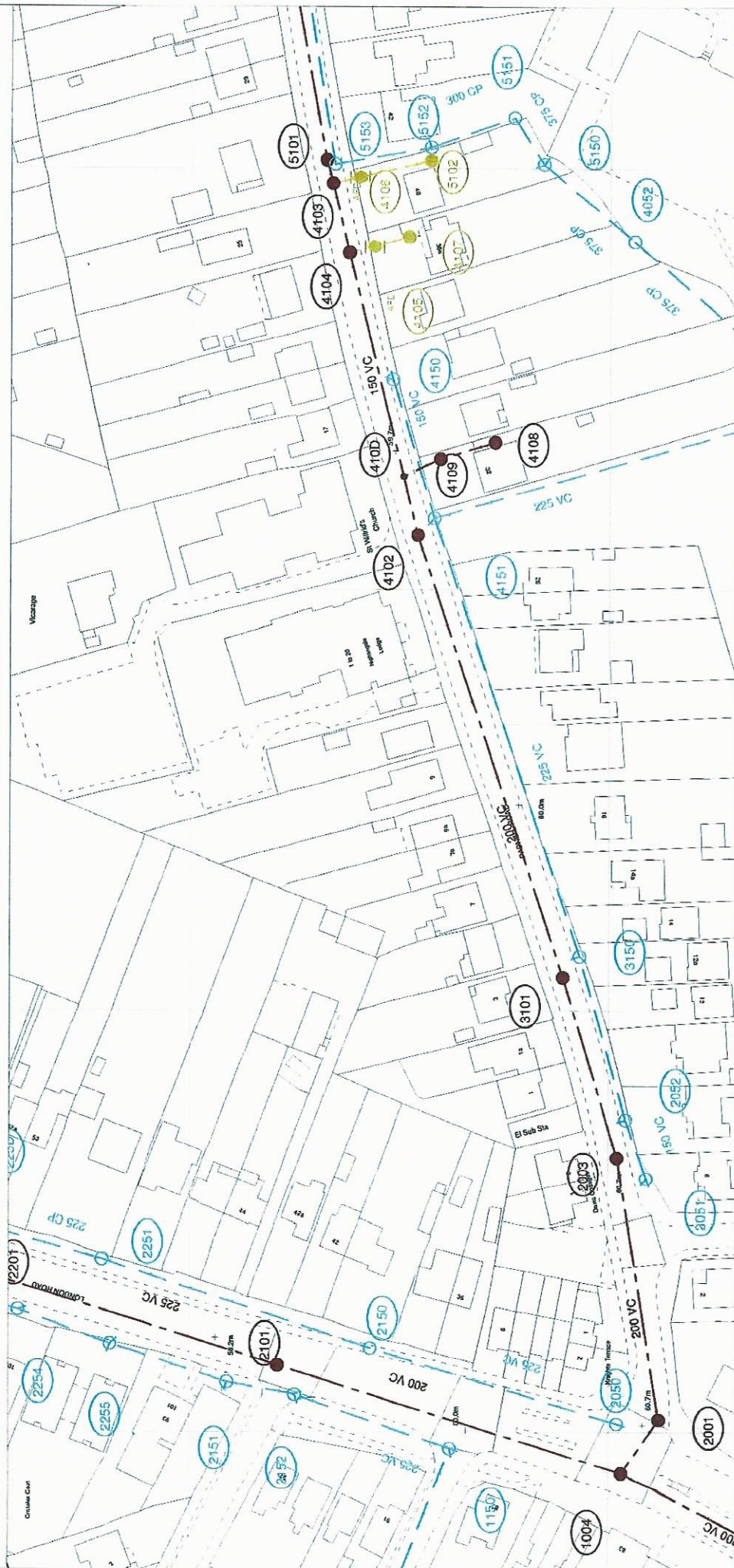
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WARNING: BAC pipes are constructed of Reinforced Asbestos Cement
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SOUTHERN WATER



The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site.

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O.S. REF: SU6911SW

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WARNING: BAC pipes are constructed of Bonded Asbestos Cement
WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement

Scale: 1:1250

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Improvements

Requested By:



Date: 8-4-2014