

# Residents Meeting Brandon Gardens and St. Nicholas Road, Prestwick

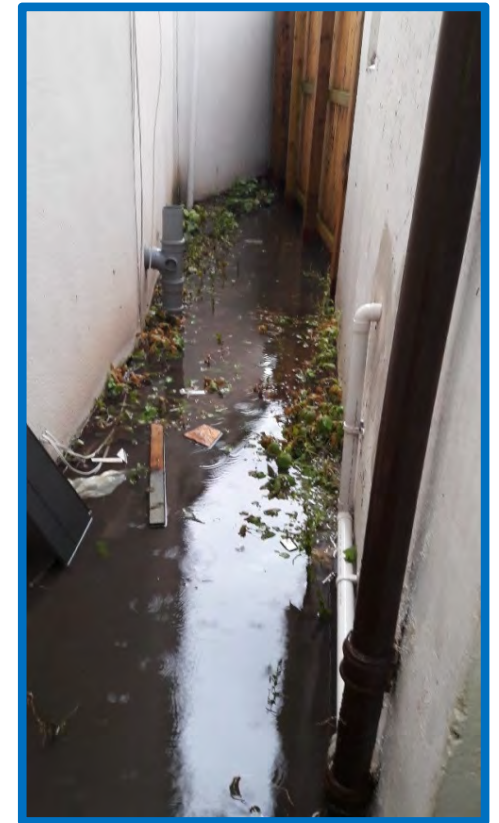
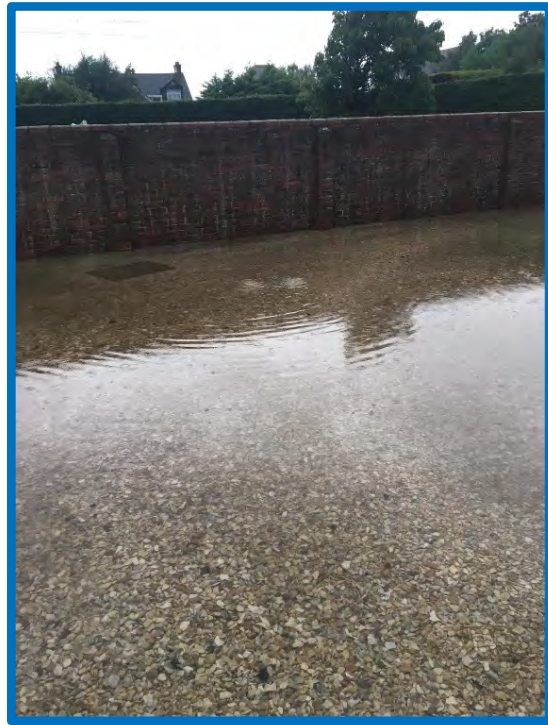
5 September 2019



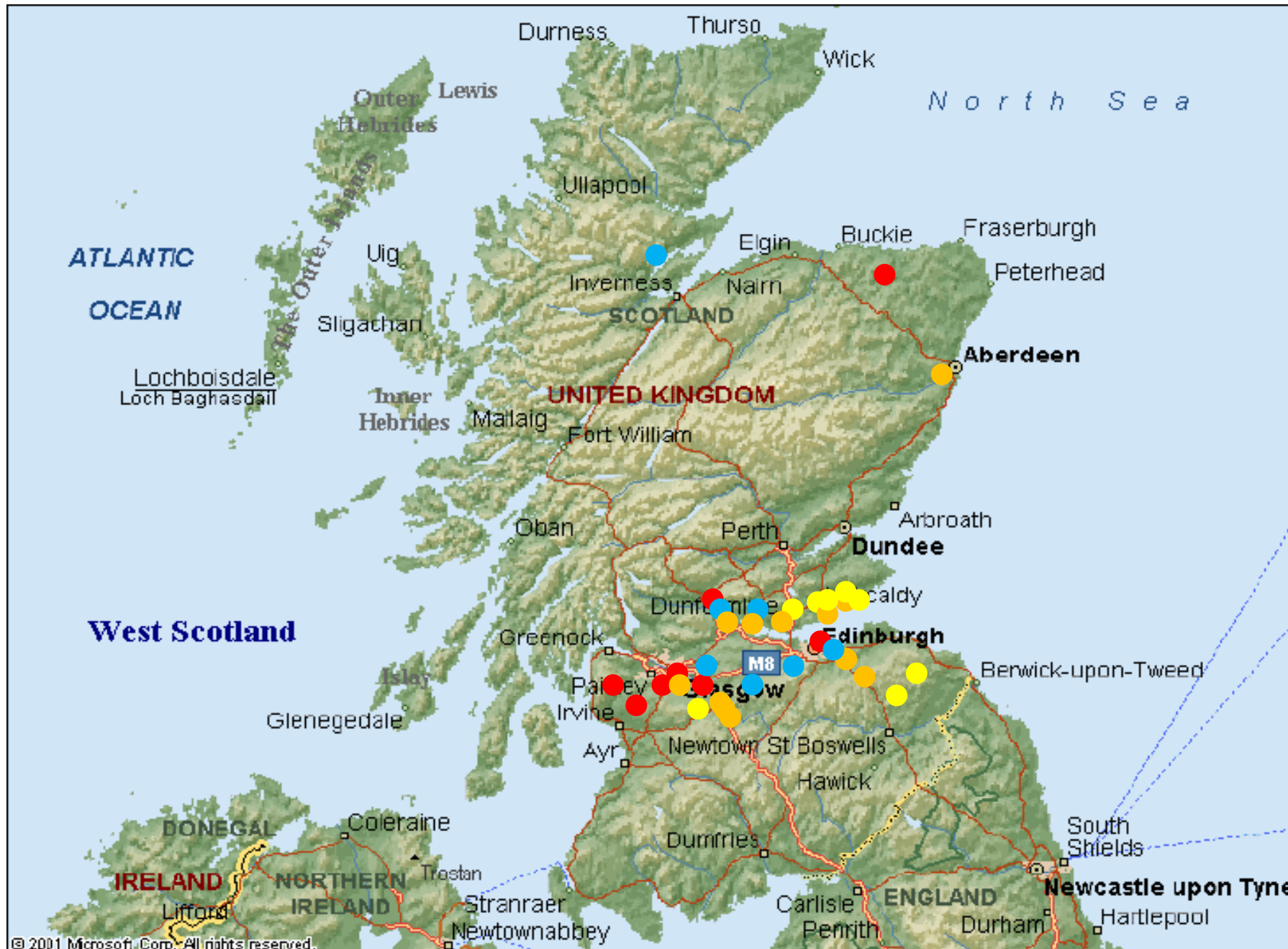
# Agenda

- Introductions
- Overview of recent and ongoing flooding
- Actions from residents meeting on 12<sup>th</sup> Mar 2019
- Proposed short term mitigations
- Proposed medium term flood risk reduction measures
- Prestwick Strategic Study (longer term solution)
- Summary

# Recent Flooding in Prestwick



# Rainfall Return Period Analysis: June - Aug 2019



- >30-250 years
- >250-500 years
- >500-750 years
- >750 years

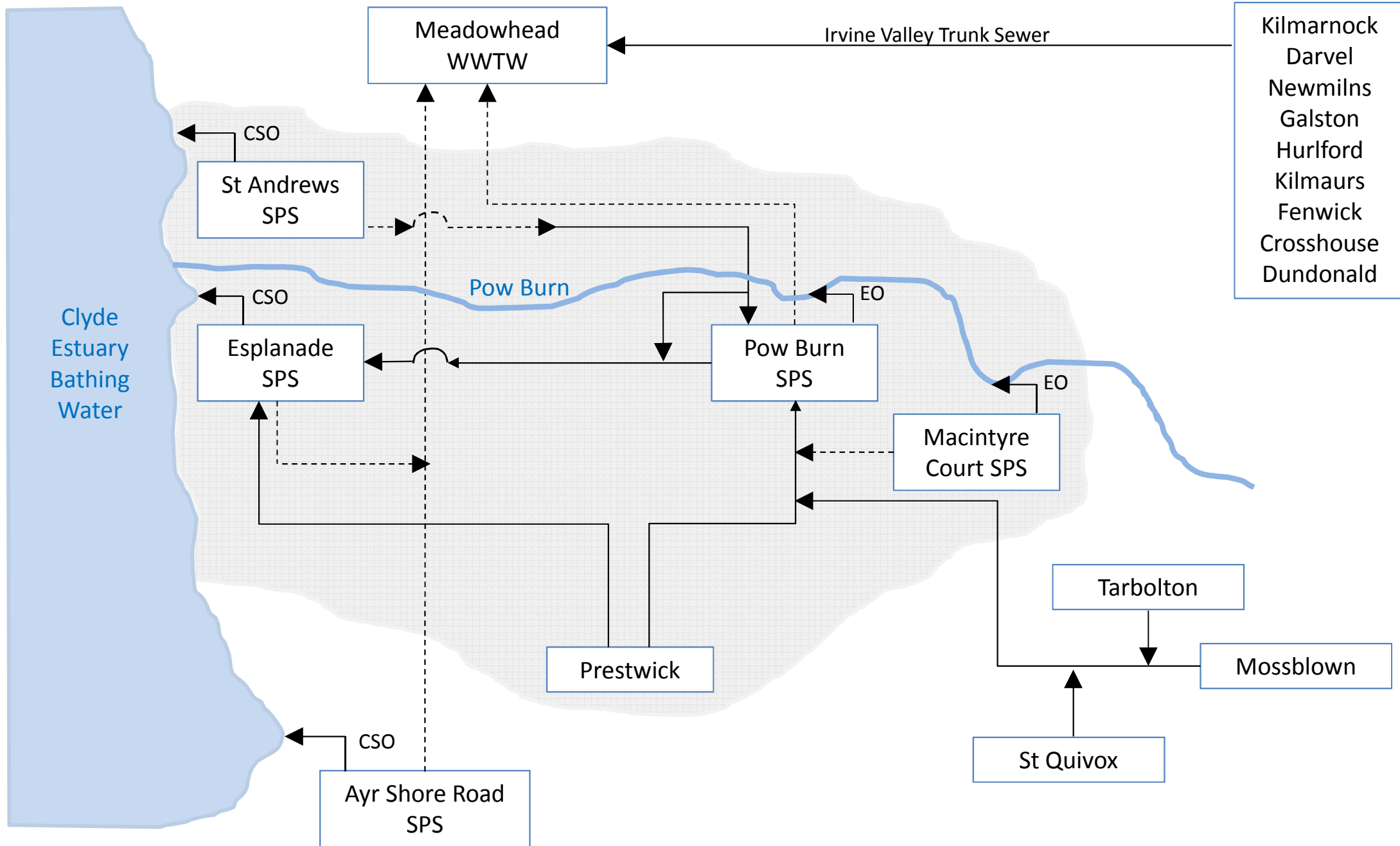
# Actions from Residents Meeting on 12<sup>th</sup> March 2019

Action	Update
Scottish Water to hold further community session before progressing towards planning on any of the proposals.	This meeting tonight is to provide an update.
Scottish Water will look at additional ideas provided including use of land behind No 19 Brandon Gardens next to the railway and land at Meadowbank Lane.	This has been investigated and details will be shared as part of this presentation.
Scottish Water will develop further the preferred option proposed for Brandon Gardens including visual representations.	Discussed Tonight.
Scottish water will provide a summary of the discussion points raised at the meeting as well as a copy of the slides.	A summary of the residents meeting on 12 <sup>th</sup> March 2019 and copy of slides was issued by post to all residents in Brandon Gardens and St Nicholas Road.
Scottish Water to contact customers again, with notes of the meeting, and confirm that if customers weren't able to attend and want to meet or discuss with Scottish Water then to contact them.	A summary of the residents meeting on 12 <sup>th</sup> March 2019 and copy of slides was issued by post to all residents in Brandon Gardens and St Nicholas Road. All customers were invited to contact Scottish Water if they had any queries. Scottish Water also met with some residents following individual requests.

# Actions from Prestwick Strategic Study Stakeholder Group Meeting on 31<sup>st</sup> May 2019

Action	Update
Scottish Water to work with Ayrshire Roads Alliance, to investigate speed tables on streets adjacent to Ayr Road as an option to alleviate flooding.	Speed Tables have been investigated and findings will be shared as part of this presentation.
The land behind Brandon Gardens to be considered as a potential storage option.	Utilising land behind Brandon Gardens has been investigated and findings will be shared as part of this presentation

# High level Schematic of Prestwick Network as part of Meadowhead Sewer System



# What have we been doing about flooding?

- Developing short term mitigations and medium term flood reduction measures to reduce the impact of both internal and external flooding.
- Prestwick Strategic Study Ongoing
- Surveys undertaken to support Prestwick Strategic Study
- Supporting customers



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# Short Term Mitigations



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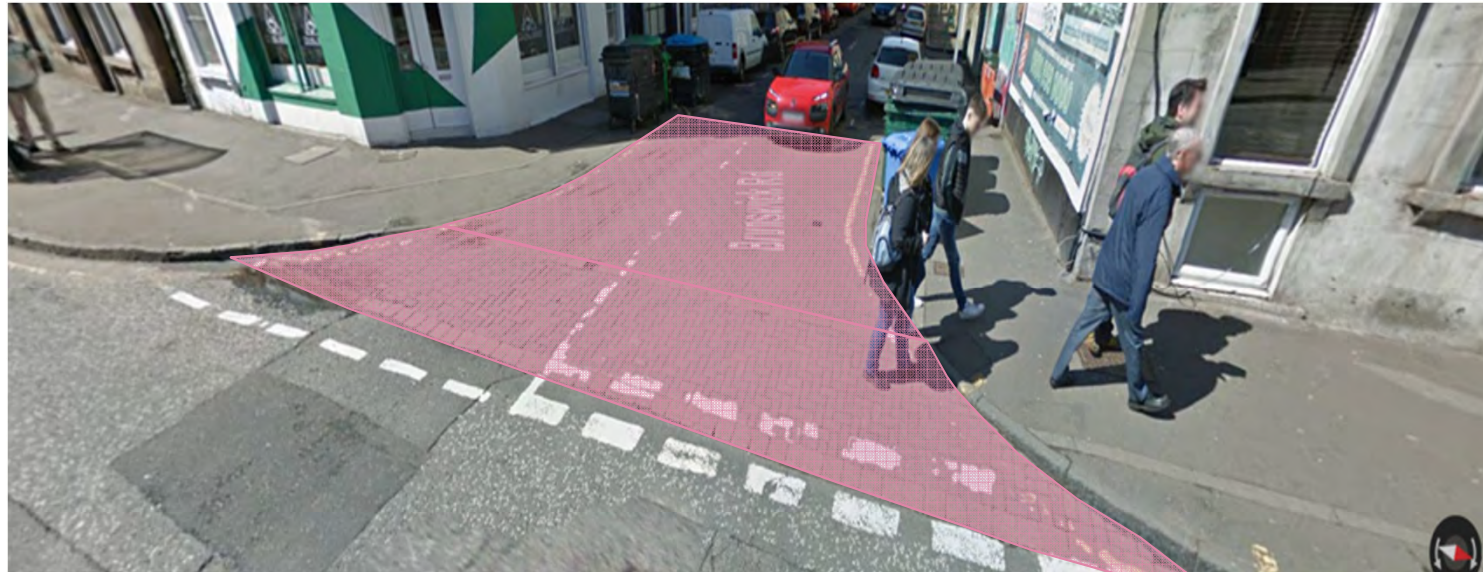


# Proposed Short Term Mitigations

## Non Return Valves (NRVs)



## Speed Tables

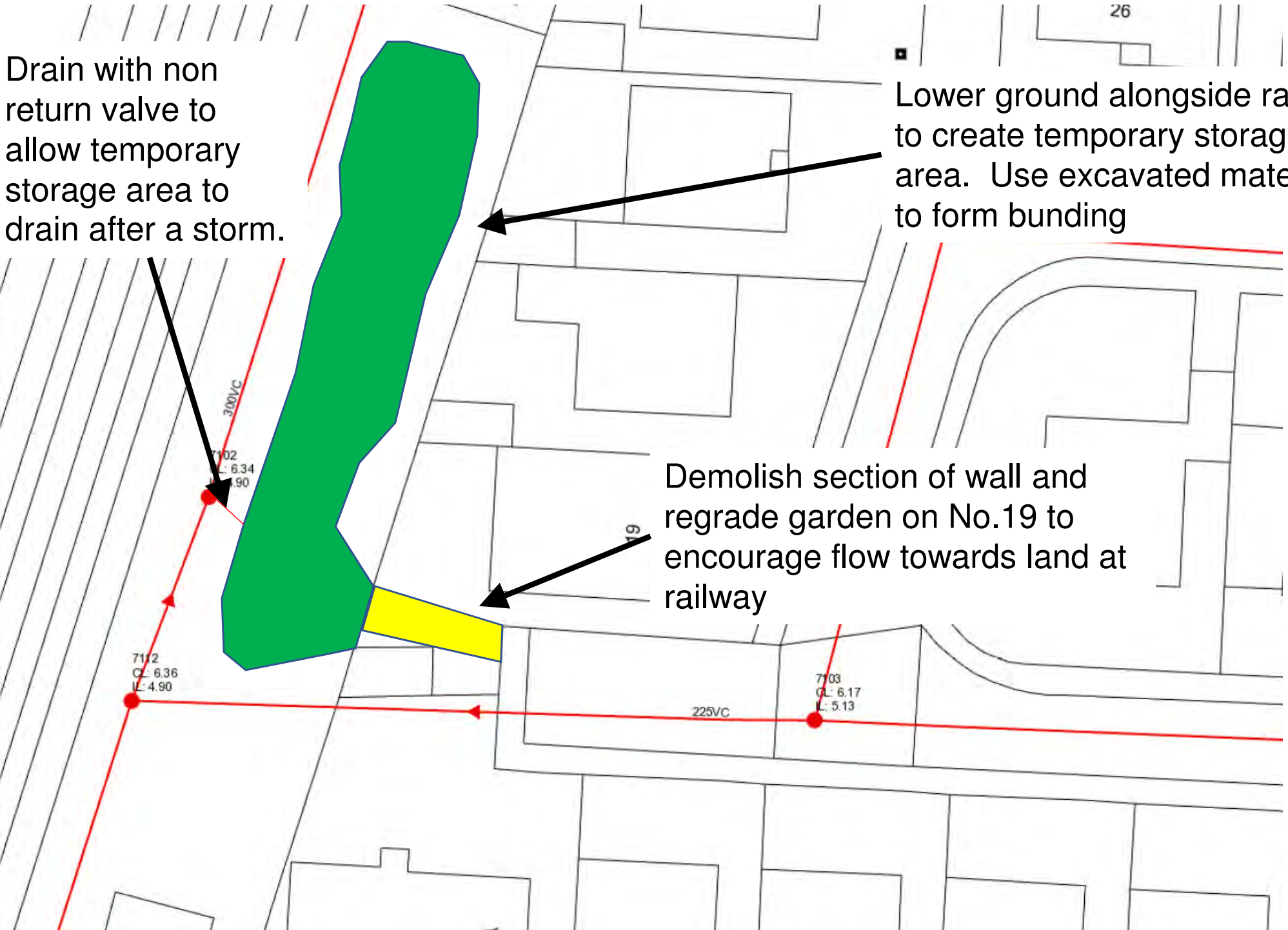


# Temporary Flood Area to rear of 19 Brandon Gardens

Drain with non return valve to allow temporary storage area to drain after a storm.

Lower ground alongside railway to create temporary storage area. Use excavated material to form bunding

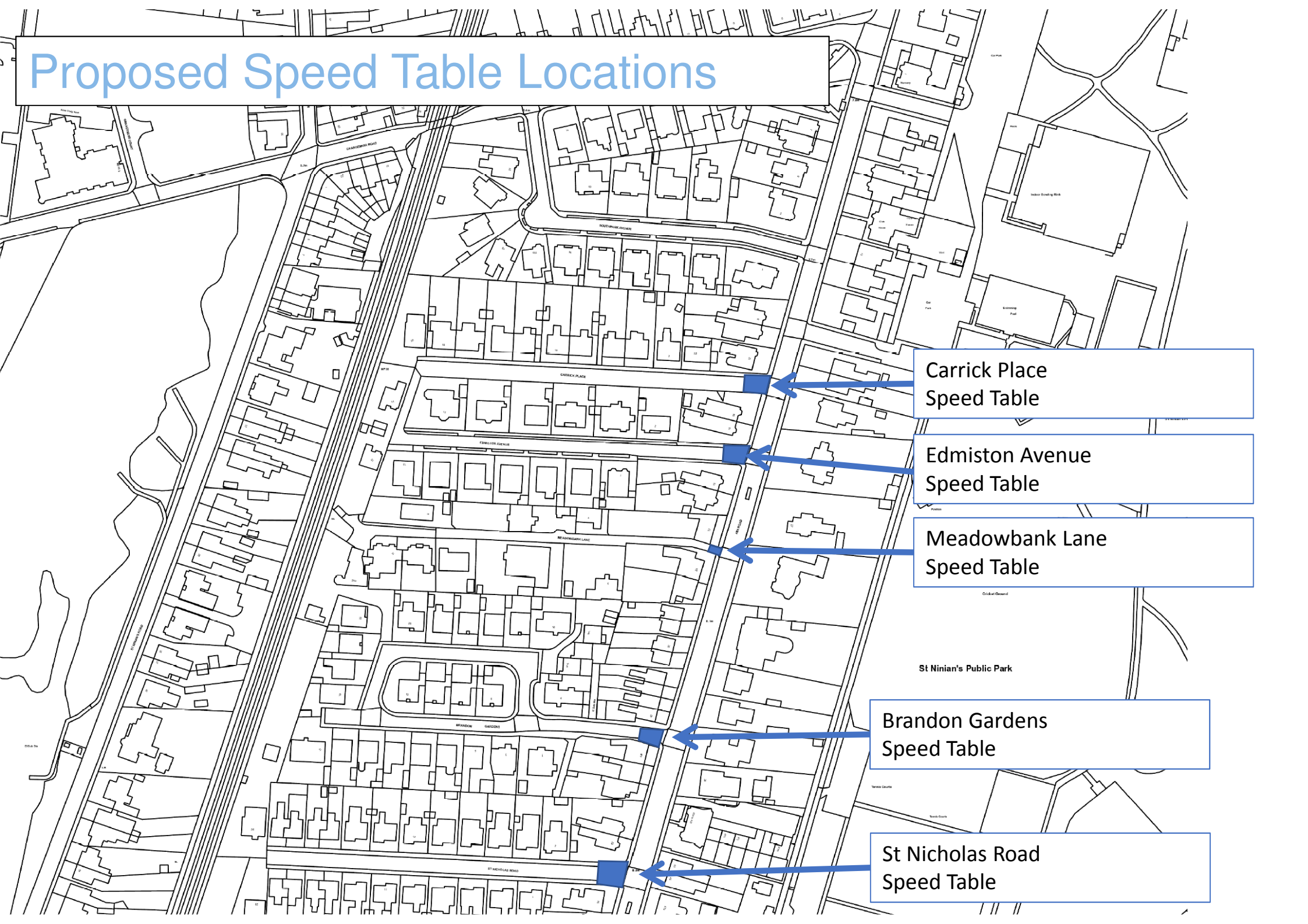
Demolish section of wall and regrade garden on No.19 to encourage flow towards land at railway



# Timeline for NRVs & temporary flood area

<b>Temporary Mitigations</b>	<b>2019</b>			
	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>Planned Programme</b>				
Install NRVs in Properties where this is identified to provide benefit.				
Complete purchasing land alongside railway to create a temporary flood area (indicative timescale)				
Reprofile land to create temporary flood area				

# Proposed Speed Table Locations



Carrick Place  
Speed Table

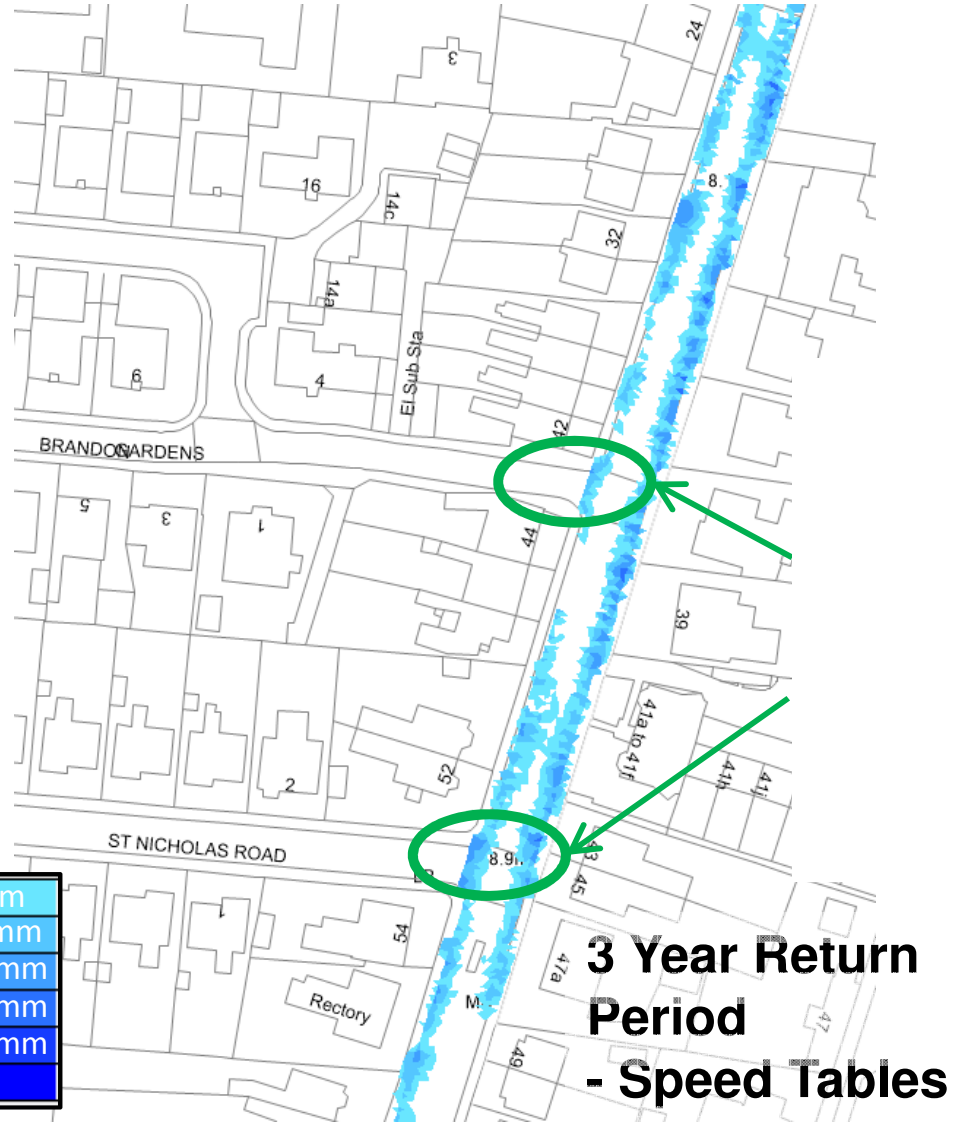
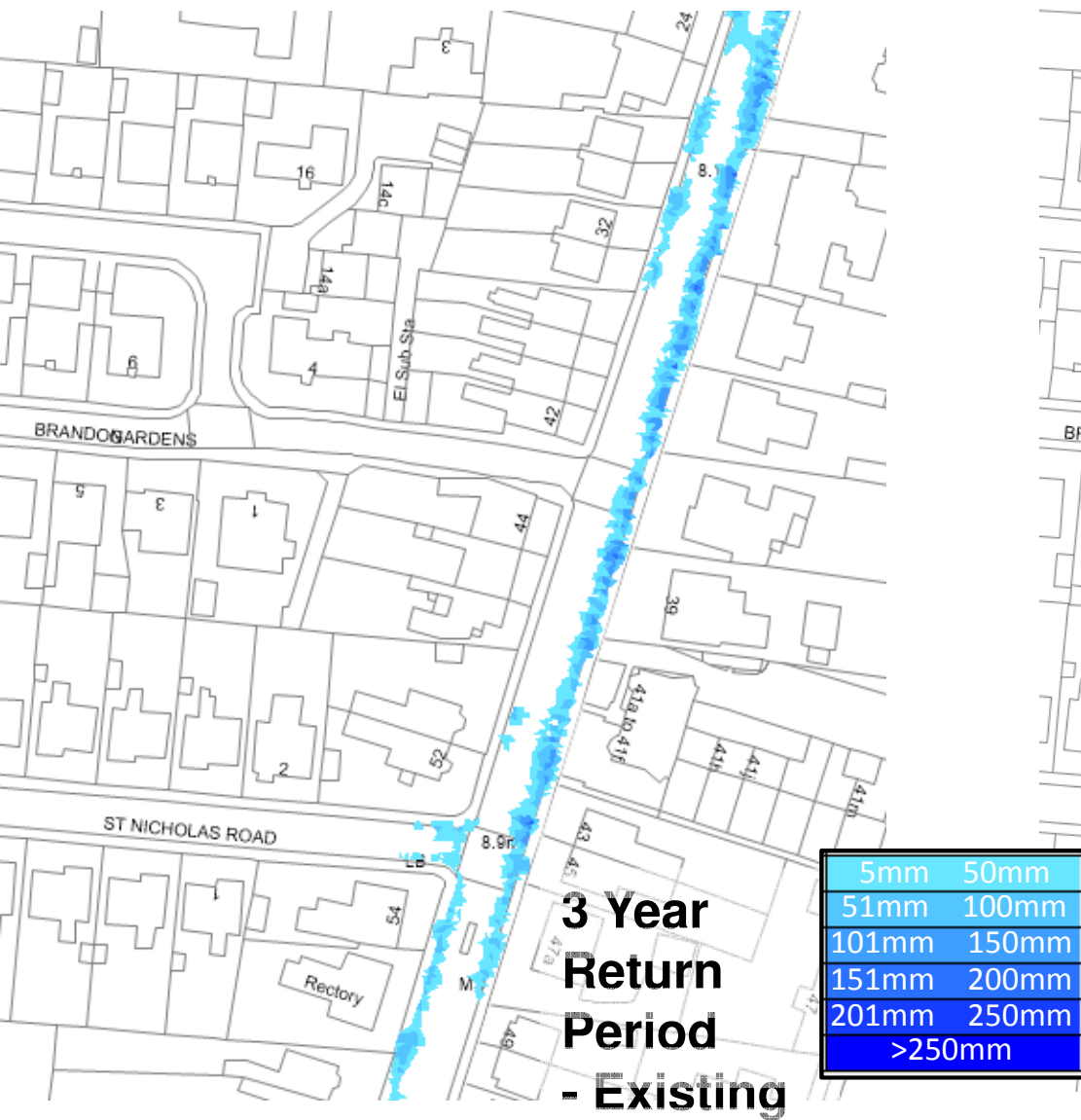
Edmiston Avenue  
Speed Table

Meadowbank Lane  
Speed Table

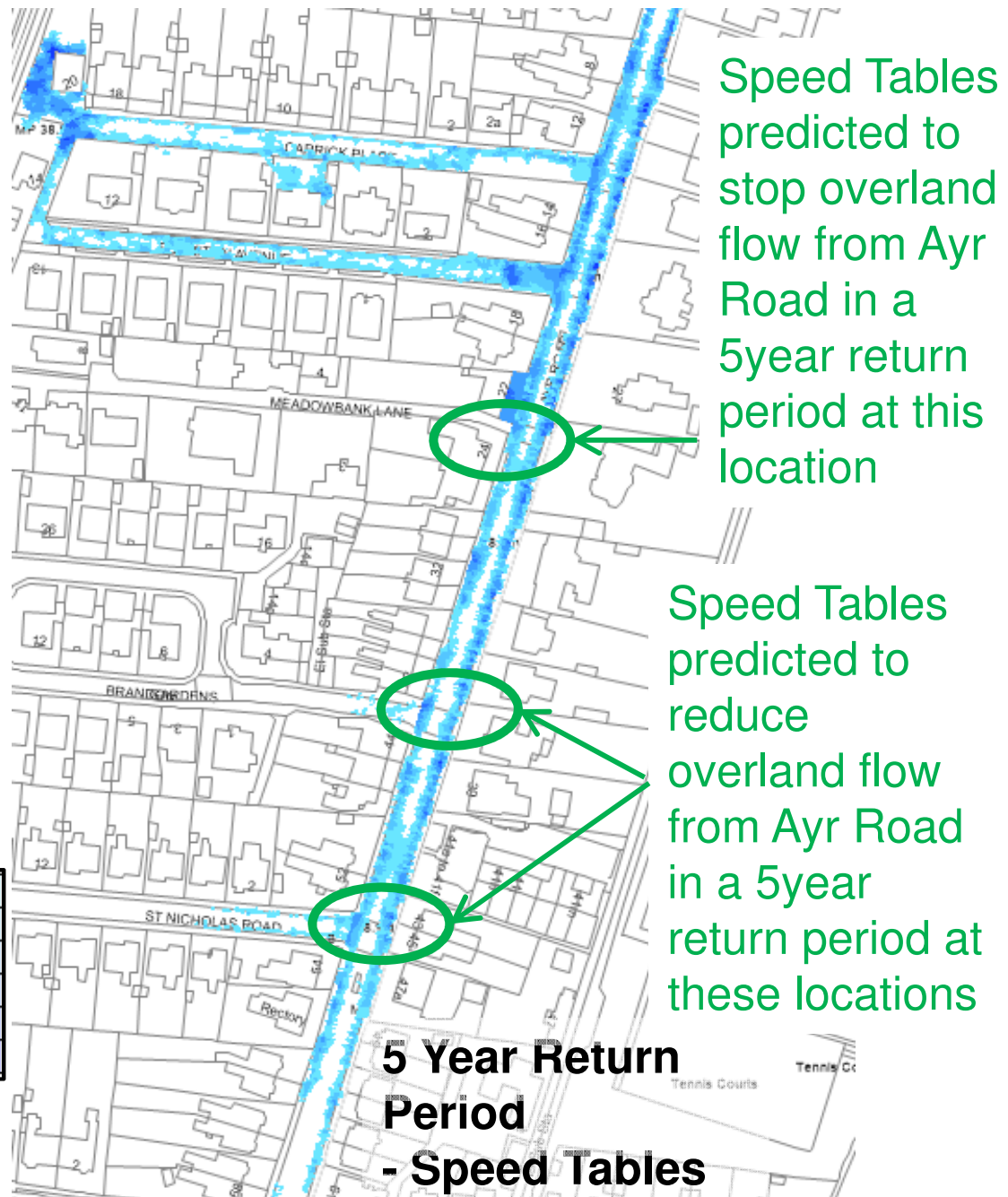
Brandon Gardens  
Speed Table

St Nicholas Road  
Speed Table

# Speed Tables – 2D Assessment



# Speed Tables – 2D Assessment



# Construction and Timeline for Speed Tables

<b>Speed Tables</b>	<b>2019</b>			
	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>Planned Programme</b>				
Present proposals for Speed Tables				
Consult with Local Community on Speed Tables through letter drop.				
Construct Speed Tables				
<b>Accelerated Programme if Prestwick Strategic Study Stakeholder Group make the decision on behalf of the community</b>				
Present proposals for Speed Tables				
Stakeholder Group Consult with Local Community on Speed Tables and give agreement				
Construct Speed Tables				

# Medium Term Flood Reduction Measures



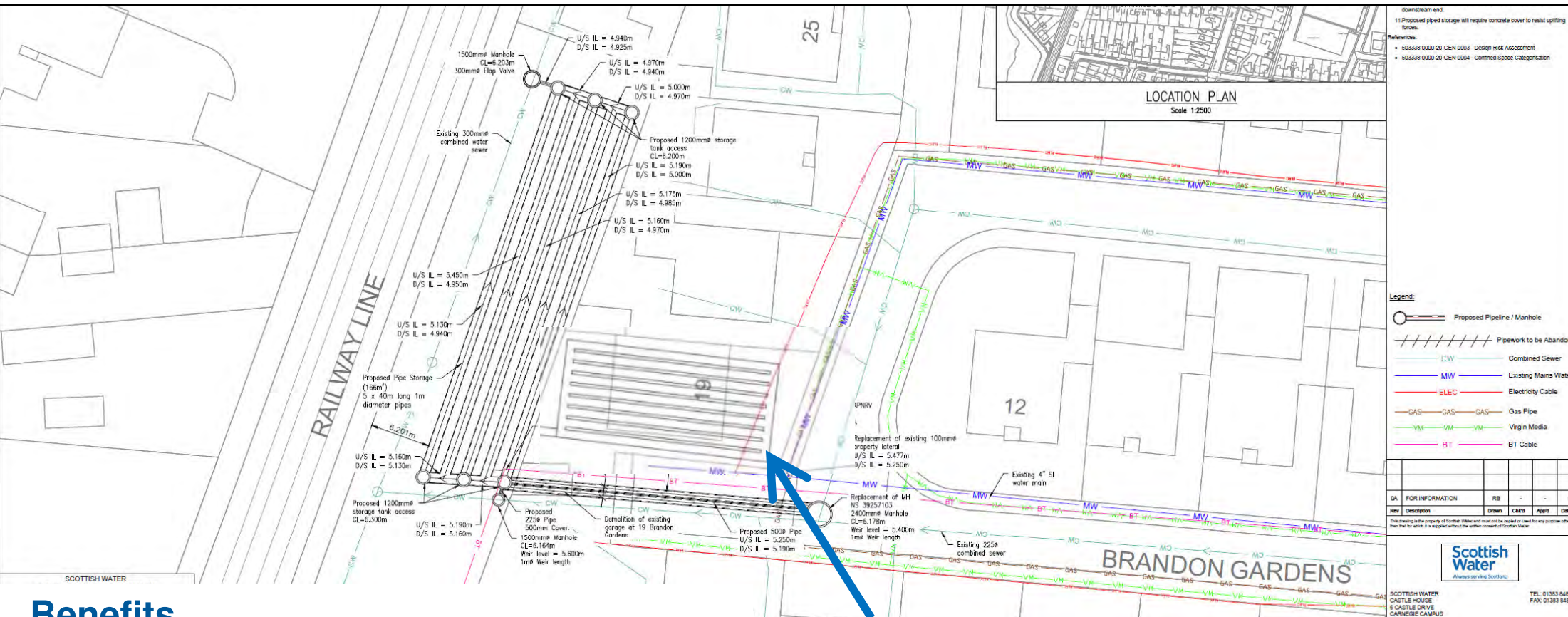
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# Proposed Medium Term Flood Risk Reduction Measures (in addition to speed tables)

## New Storage Pipe and Storage Tank in Brandon Gardens



### Benefits

- Would provide 6 year protection for Brandon Gardens.

### Risks

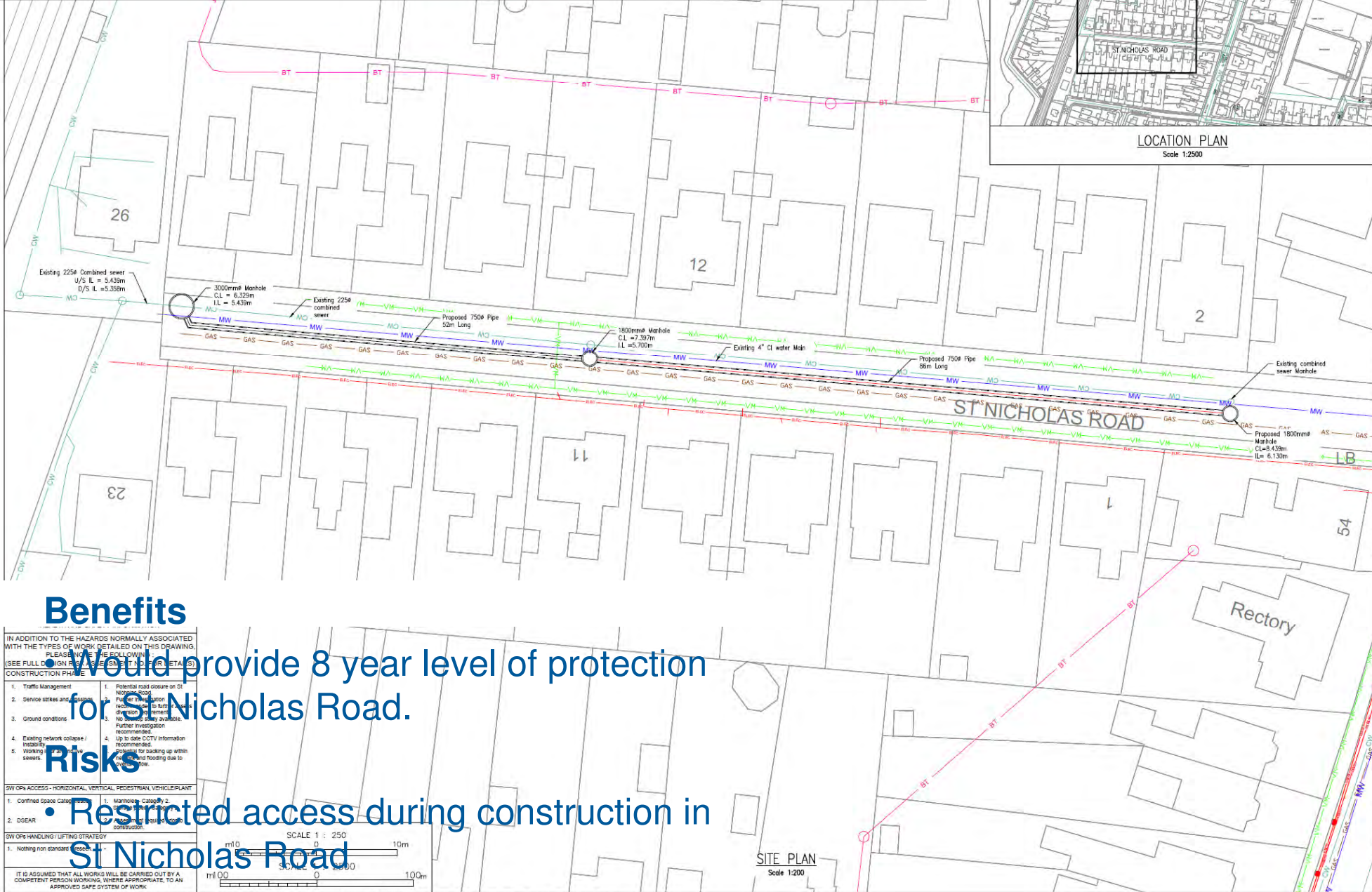
- Working alongside railway. Potential time implications.

### Opportunities

- If 19 Brandon Gardens plot used to provide additional storage, this could increase the level of protection to 10 Year.

# Proposed Medium Term Flood Risk Reduction Measures (in addition to speed tables)

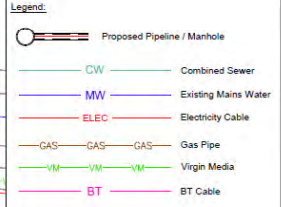
## New Storage Pipe in St Nicholas Road



- Existing service information has been provided by utility companies and should be considered indicative only.
- Manhole access covers to BS EN124 and Class D400 were installed within carriageways and B125 in non-trafficked areas.
- Overlapping likely required at the in to existing network.
- Existing 4" CI water main may require diversion as part of works. Utility investigation to be undertaken by contractor.

References:

- 503338-0000-20-GEN-0003 - Design Risk Assessment
- 503338-0000-20-GEN-0004 - Confirmed Space Categorisation



Rev	Description	Drawn	CHKD	Apprd	Date
0A	FOR INFORMATION				



SCOTTISH WATER  
CASTLE HOUSE  
5 CASTLE DRIVE  
CARINGISH CAMPUS  
DUNFERMLINE  
FIFE, KY11 9GG

ARC  
83 BOTHWELL STREET  
MERCANTILE CHAMBERS  
GLASGOW  
G1 4RU

Designed by K.FALCONER	Drawn by R.BLAN	Checked by	Approved by
Date 21/09/2019	Date 21/09/2019	Date	Date
Scale AS SHOWN	Sheet	FOR INFORMATION	

Project Title  
PRESTWICK STRATEGIC FLOODING

Drawing Title  
PROPOSED STORAGE SOLUTION  
SITE LAYOUT - SHEET 2 of 2

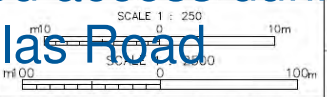
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Drawing No. 503338-0000-20-DRG-9604

### Benefits

- Works provide 8 year level of protection for St Nicholas Road.

### Risks

- Restricted access during construction in St Nicholas Road



SITE PLAN  
Scale 1:200

IN ADDITION TO THE HAZARDS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, PLEASE NOTE THE FOLLOWING: (SEE FULL DRAWING FOR DETAILS OF THE PRESTWICK STRATEGIC FLOODING CONSTRUCTION PHASE)

1. Traffic Management	1. Potential road closure on St Nicholas Road
2. Service strikes and delays	2. Full investigation recommended to identify any service strikes and delays
3. Ground conditions	3. No service strikes available. Further investigation recommended.
4. Existing network collapse / instability	4. Up to date CCTV information recommended. Potential for backing up within existing network and flooding due to slow flow.
5. Working near live sewers.	

SW OPS ACCESS - HORIZONTAL, VERTICAL, PEDESTRIAN, VEHICLE/PLANT

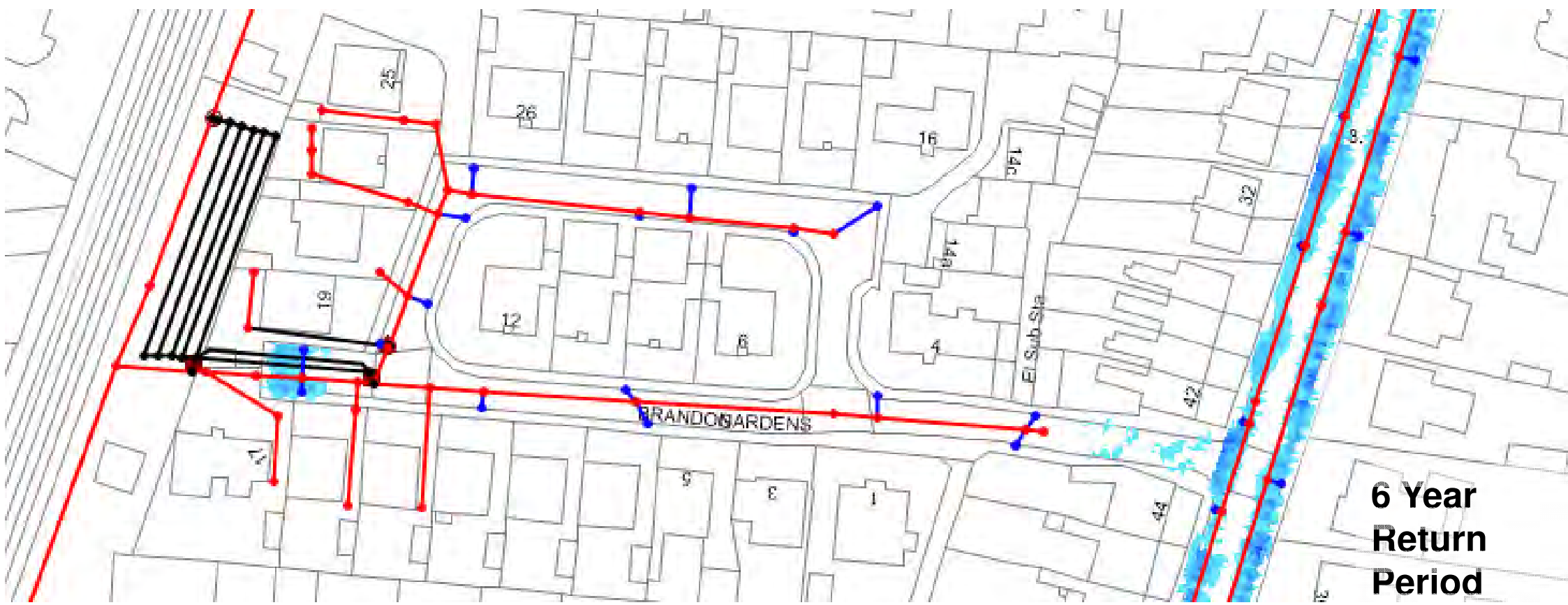
1. Confined Space Categorisation	1. Manholes - Category 2
2. DSEAR	2. Gas - Category 2

SW OPS HANDLING / LIFTING STRATEGY

1. Nothing from standard cases	
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IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT PERSON WORKING, WHERE APPROPRIATE, TO AN APPROVED SAFE SYSTEM OF WORK.

# Storage & Speed Tables – 2D Assessment (Brandon Gardens)



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# Storage & Speed Tables – 2D Assessment (St Nicholas Road)



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# Potential Additional Medium Term Flood Risk Measures

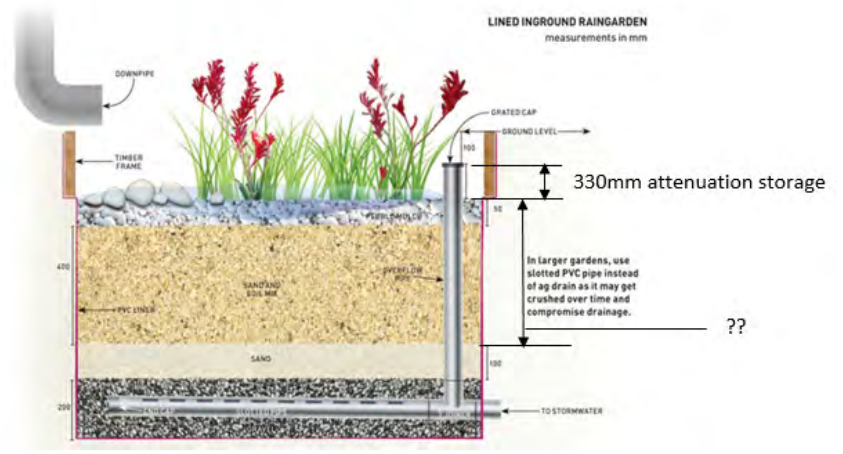
- New Surface Water drain in Ayr Road down to Grangemuir Road
- Kerb Drainage Channels along Ayr Road
- Property Level Surface Water Attenuation

# Property Level Surface Water Attenuation

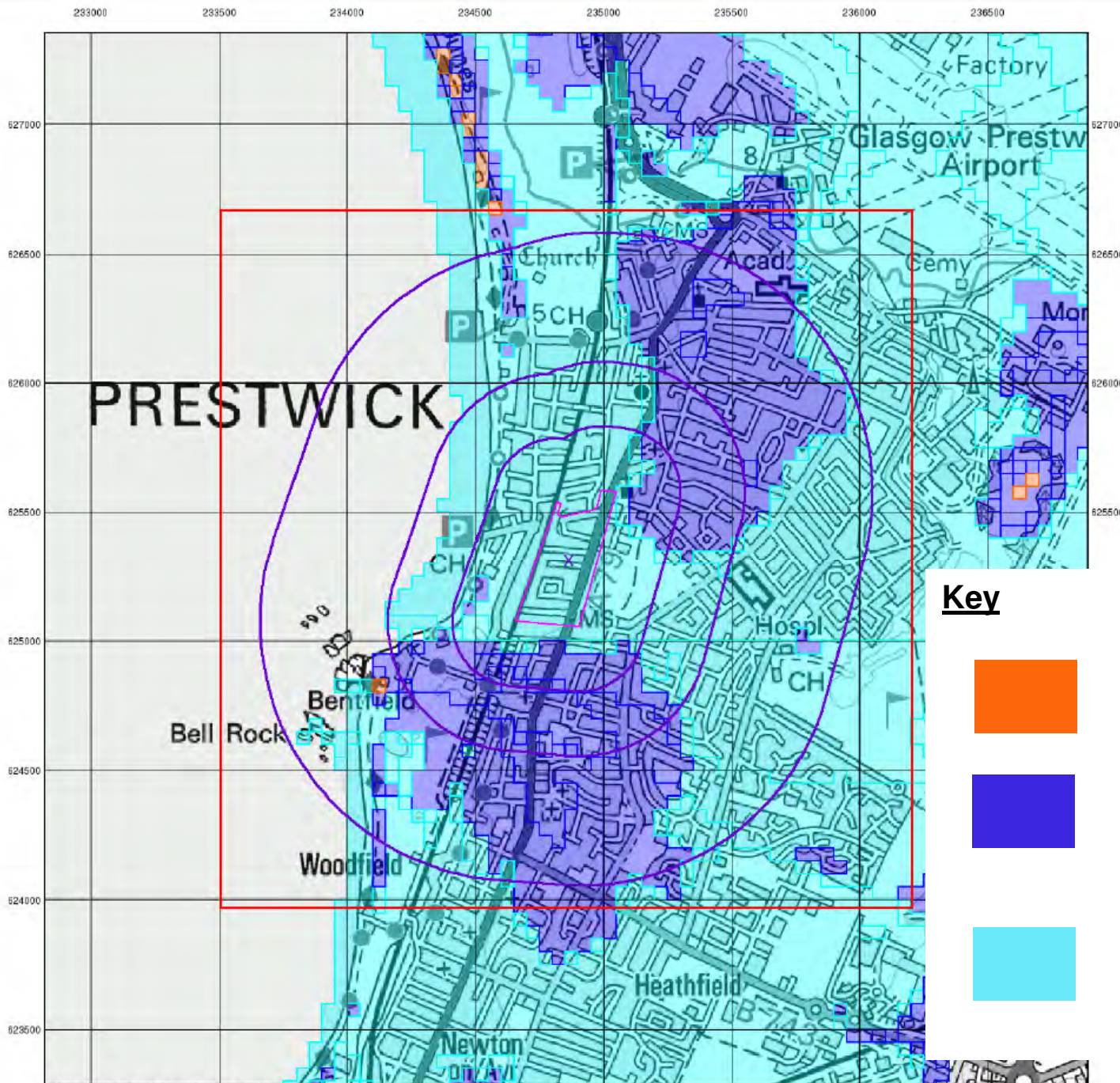
## Water Butts



## Rain Gardens



# Envirocheck – Groundwater Flood Risk Map



**Envirocheck**  
 LANDMARK INFORMATION GROUP®

**BGS Flood GFS Data**




**General**

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice

**Agency and Hydrological (Flood)**

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

**Key**

-  - Limited Potential for Groundwater Flooding to Occur
-  - Potential for Groundwater Flooding of Property Situated Below Ground Level
-  - Potential for Groundwater Flooding to Occur at Surface

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# Prestwick Strategic Study Timelines

(dependent on model findings)

	2019												2020												2021				
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May				
<b>Prestwick Flooding</b>																													
<b>Brandon Gardens &amp; St Nicholas Road</b>																													
Further develop options under consideration and inform stakeholders of findings.	█	█	█	█	★																								
<b>Prestwick Strategic Study</b>																													
Surveys		█	█	█	█																								
Flow Survey						█	█	█																					
Model Maintenance									█	█	█																		
Re-assess Model Predictions and Hydraulic Review												█																	
Optioneering – Long List													★	█	█	█													
Optioneering – Short List																	★	█											
Costing of Options																		█	█										
Identify Preferred Options																				█	█								
Preparation of Design Deliverables																						★	█	█					



Proposed Stakeholder meetings



# Summary

- Recognise historic and complex issues relating to sewer flooding in Prestwick
- Committed to progressing **Prestwick Strategic Drainage Study** to identify strategic solutions
- In interim committed to doing what we can to reduce frequency/impact of localised flooding in Brandon Gardens & St Nicholas Road
- Will maintain dialogue with the community as we progress



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