An aerial photograph of Prestwick, Scotland, showing a dense residential area, industrial buildings, and the Prestwick Airport runway on the right. The sea is visible on the left side of the image.

Prestwick Strategic Study Stakeholder Workshop

Friday 19th February 2021

An aerial photograph of a city, likely San Francisco, showing a dense urban grid, a large body of water (the bay) on the left, and an airport on the right. The word "Introductions" is overlaid in the center in a bold, black, sans-serif font.

Introductions

Terms of Reference

DATE: 19th February 2021

VENUE: Teams Meeting

CHAIR: John Scott MSP

OBJECTIVES

Meeting as part of the Prestwick Strategic Study to review the interventions that will form the Preferred Solution and get input on the priority and sequencing of these interventions.

ATTENDEES

- Scottish Water – Communities, Flooding Team
- Elected Members – MP, MSP, Councillors, Council Provost
- Ayrshire Roads Alliance
- Prestwick North and South Community Councils
- P-RAAF
- Plus any other invitee as agreed

INPUTS

- Key Information from the hydraulic model summarising the existing sewer network.
- Google Earth to aid discussions.
- Others, as required

OUTPUTS

- Meeting record circulated within 3 weeks of meeting
- Action log circulated to attendees

GROUND RULES

- Come prepared
- Each individual is responsible for delivering their own actions
- Minimise background noise (*please go on mute when not speaking*)
- Start and finish on time
- Respect everyone's opinion

10.00	START <ul style="list-style-type: none">• Welcome and introductions• Review of report and actions from previous Stakeholder meeting.
10.15	OVERVIEW OF THE PREFERRED SOLUTION BEING DEVELOPED FROM THE SHORT LIST OF OPTIONS
11.00	BREAK
11.15	EVALUATE PRIORITY AND SEQUENCING OF INTERVENTIONS
12.00	ANY OTHER BUSINESS
12.15	CONCLUSION AND ACTION PLANNING
12.30	FINISH



Scottish Water
Trusted to serve Scotland

south
AYRSHIRE
COUNCIL

An aerial photograph of a coastal town. On the left, there is a wide, sandy beach meeting the ocean. The town itself is densely packed with residential buildings and streets. To the right of the town, there is a large airport with several runways and taxiways. The overall scene is a mix of urban development, natural coastline, and aviation infrastructure.

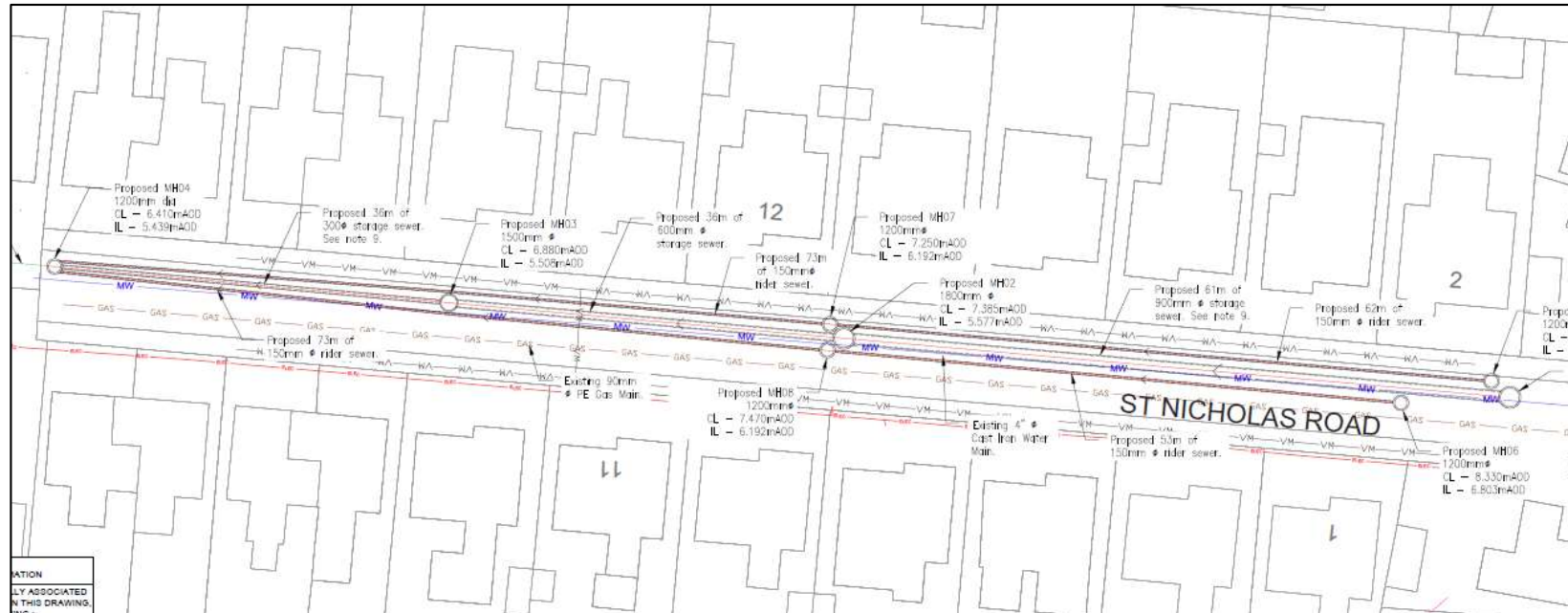
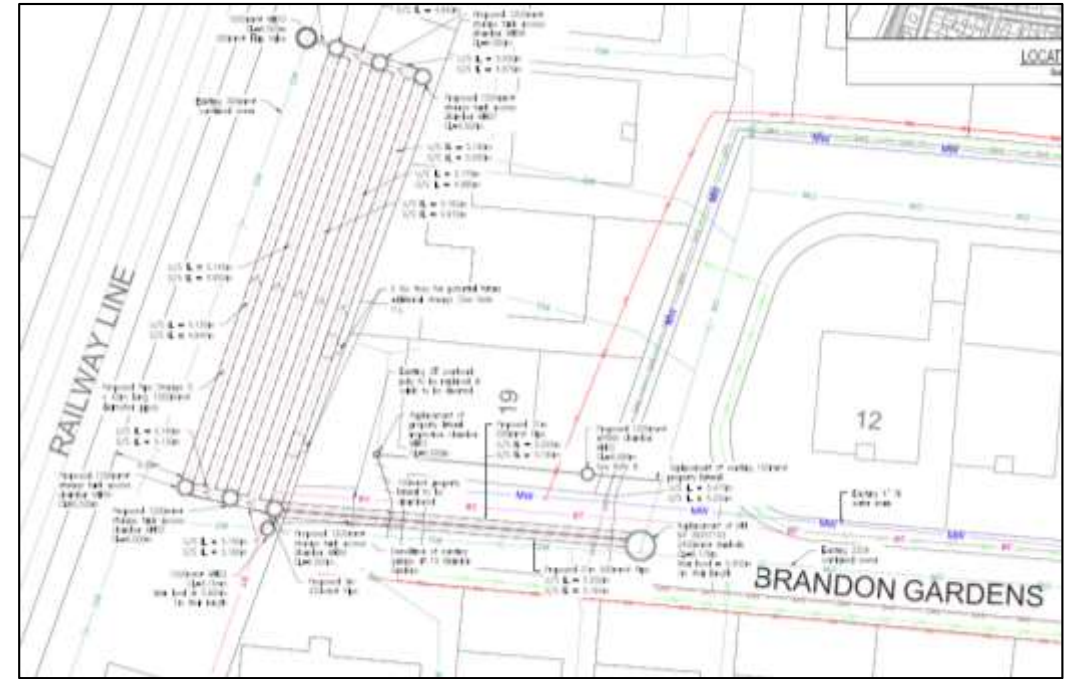
**Review of actions from
previous Stakeholder
meeting**

Review of Actions from Prestwick Strategic Study Stakeholder Group Meeting on 25th October 2020

Item	Action	Owner	Update
1	Meeting of Stakeholder Group to be arranged for January 2021. 2No meetings to be considered if longer than 2.5hours required.	Bill Elliot	Complete. Meeting arranged for 19 th Feb 2021

Update on Mitigations

- Construction work commenced January 2021 to install permanent storage in Brandon Gardens and upsize sewer in St Nicholas Road.



An aerial photograph of a city, likely Seattle, showing a dense urban grid, a coastline on the left, and an airport on the right. The word "Timeline" is overlaid in the center of the image.

Timeline

Prestwick Strategic Study Current Timeline

	2019				2020												2021						
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Surveys																							
Flow Survey																							
Model Maintenance																							
Model Predictions/Hydraulic Review																							
Optioneering – Long List																							
Optioneering – Short List and additional assessments for Surface Water Management																							
Costing of Options																							
Evaluation of interventions to form Preferred Solution																							
Prepare draft details of Preferred Solution for Flood Risk Management (FRM) Strategies submission																							
Discuss/Agree Preferred Solution with Stakeholders and final FRM Strategies submission																							



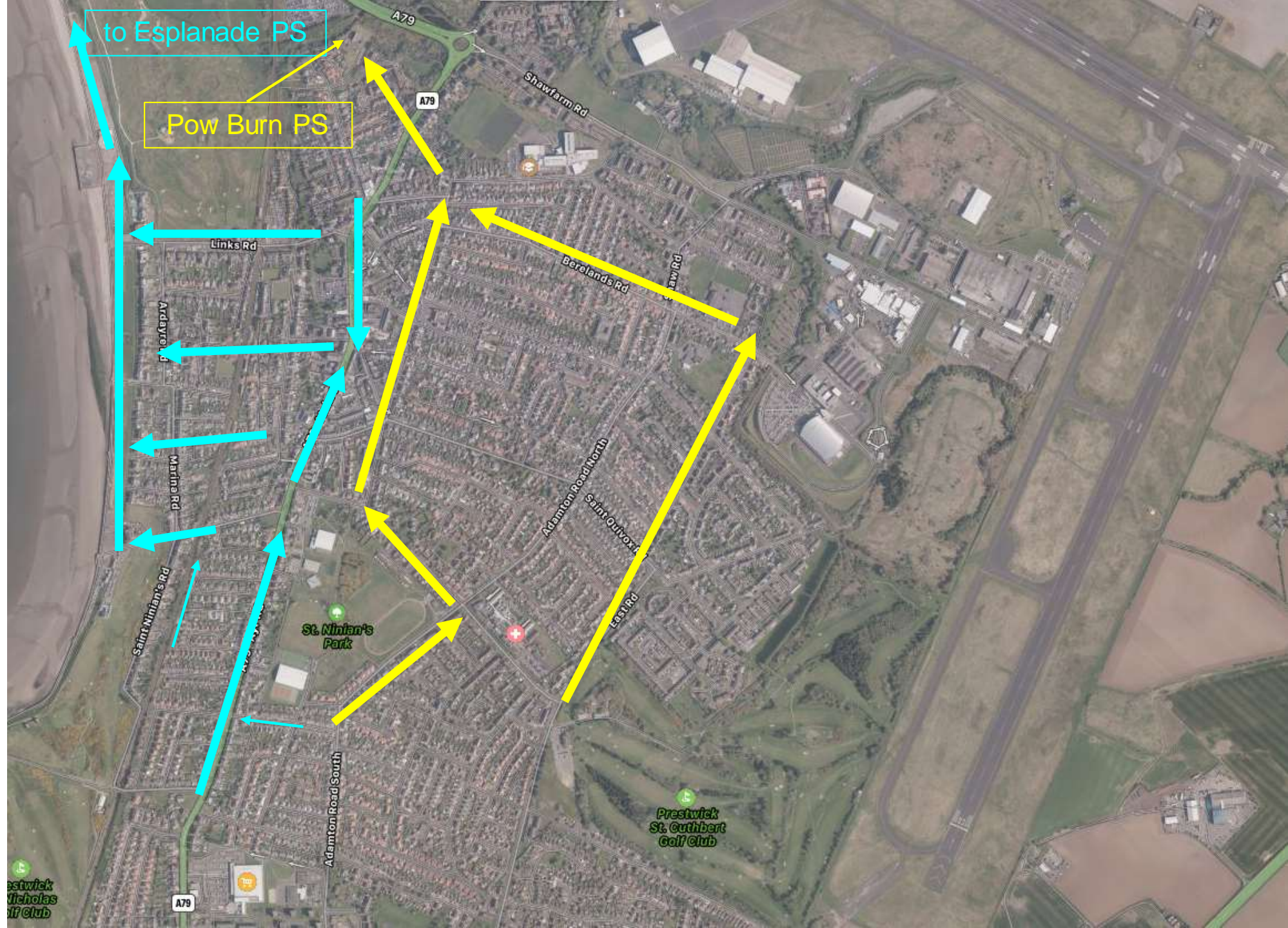
Proposed Stakeholder meetings

An aerial photograph of a city, likely Los Angeles, showing a dense urban grid. The city is situated between a large body of water (the ocean) on the left and an airport on the right. The text "The network" is overlaid in the center of the image. The image shows a complex network of streets, buildings, and infrastructure, including an airport with runways and taxiways on the right side. The text "The network" is centered in the middle of the image, overlaid on the city's street grid.

The network

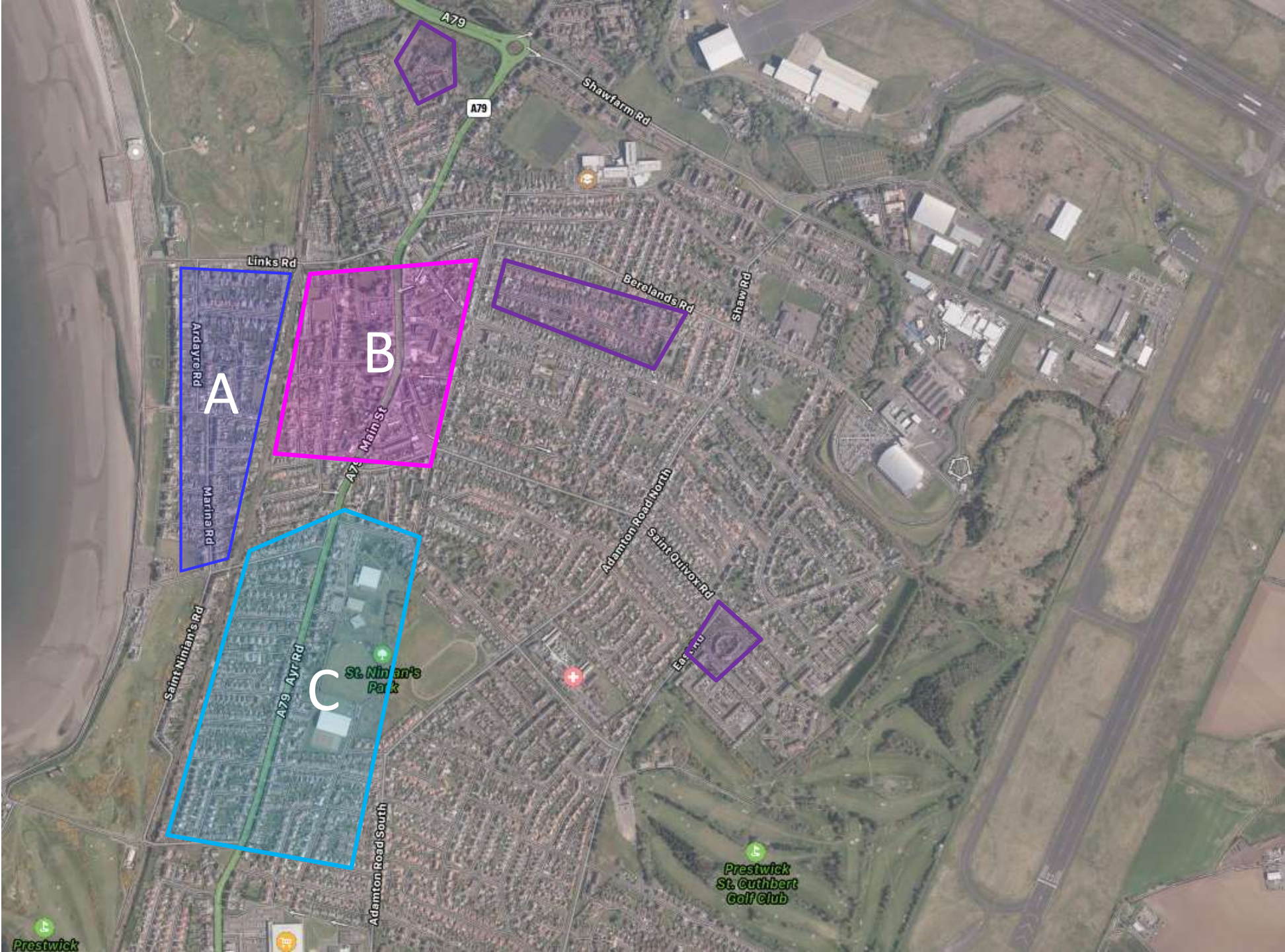
Prestwick sewer layout

- Arrows shows network to Esplanade Pumping Station
- Arrows shows network to Pow Burn Pumping Station



Flood Zones

Zone	Description
A	West of railway
B	East of railway (north)
C	East of railway (south)
	Other areas



An aerial photograph of a city, likely Portland, Oregon, showing a dense urban grid. The city is situated between a large body of water (the Columbia River) on the left and an airport on the right. The text "Pow Burn Clusters" is overlaid in the center of the image. The image shows a mix of residential and commercial buildings, with some areas appearing more densely packed than others. The text is in a bold, black, sans-serif font.

Pow Burn Clusters

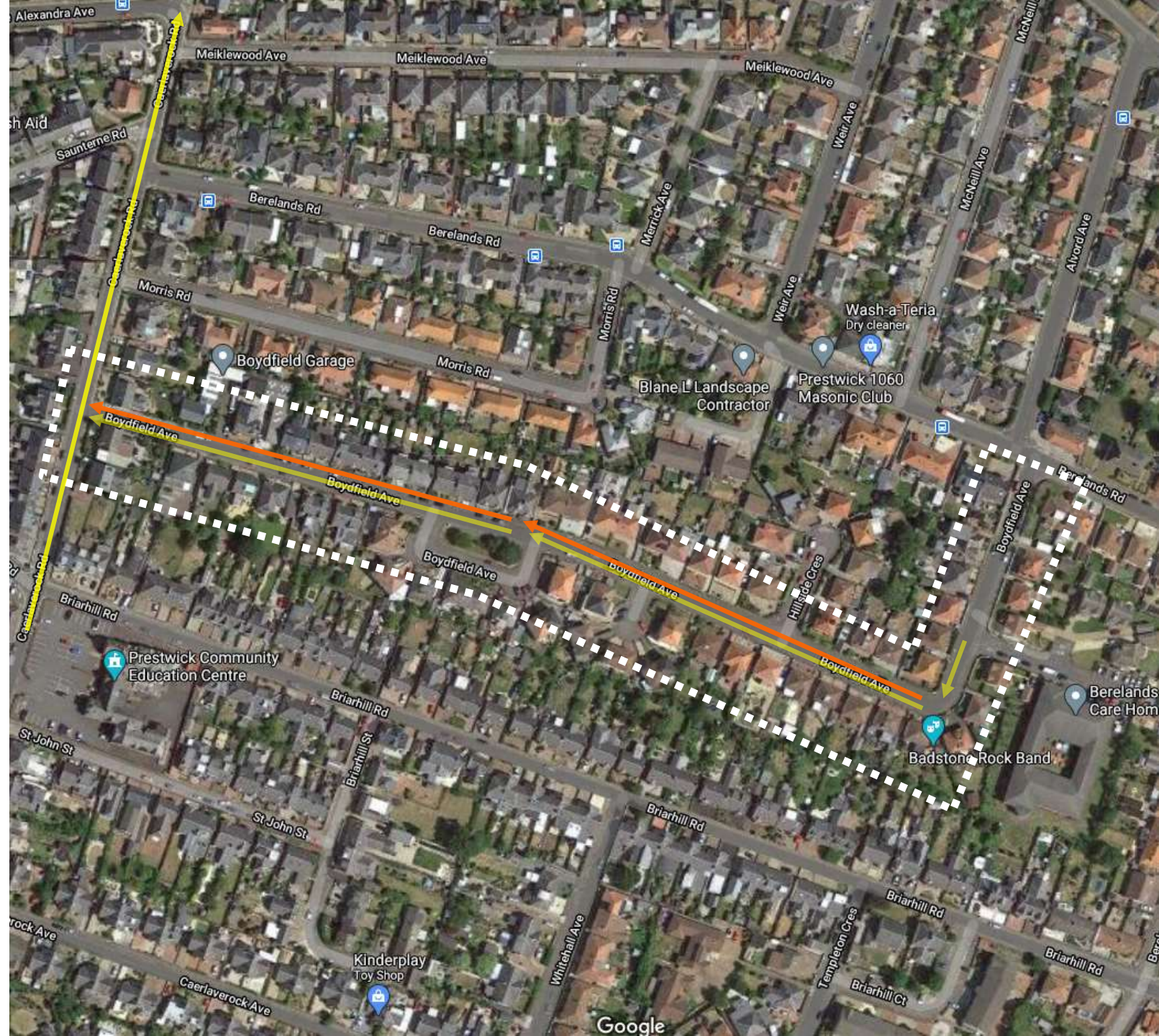
Boydfield Avenue

The problem

- Too much water trying to get into network during storms
- Garden and roads flooding

Option descriptions

1. New pipeline along the road
2. Shorter/smaller pipeline + SWM interventions



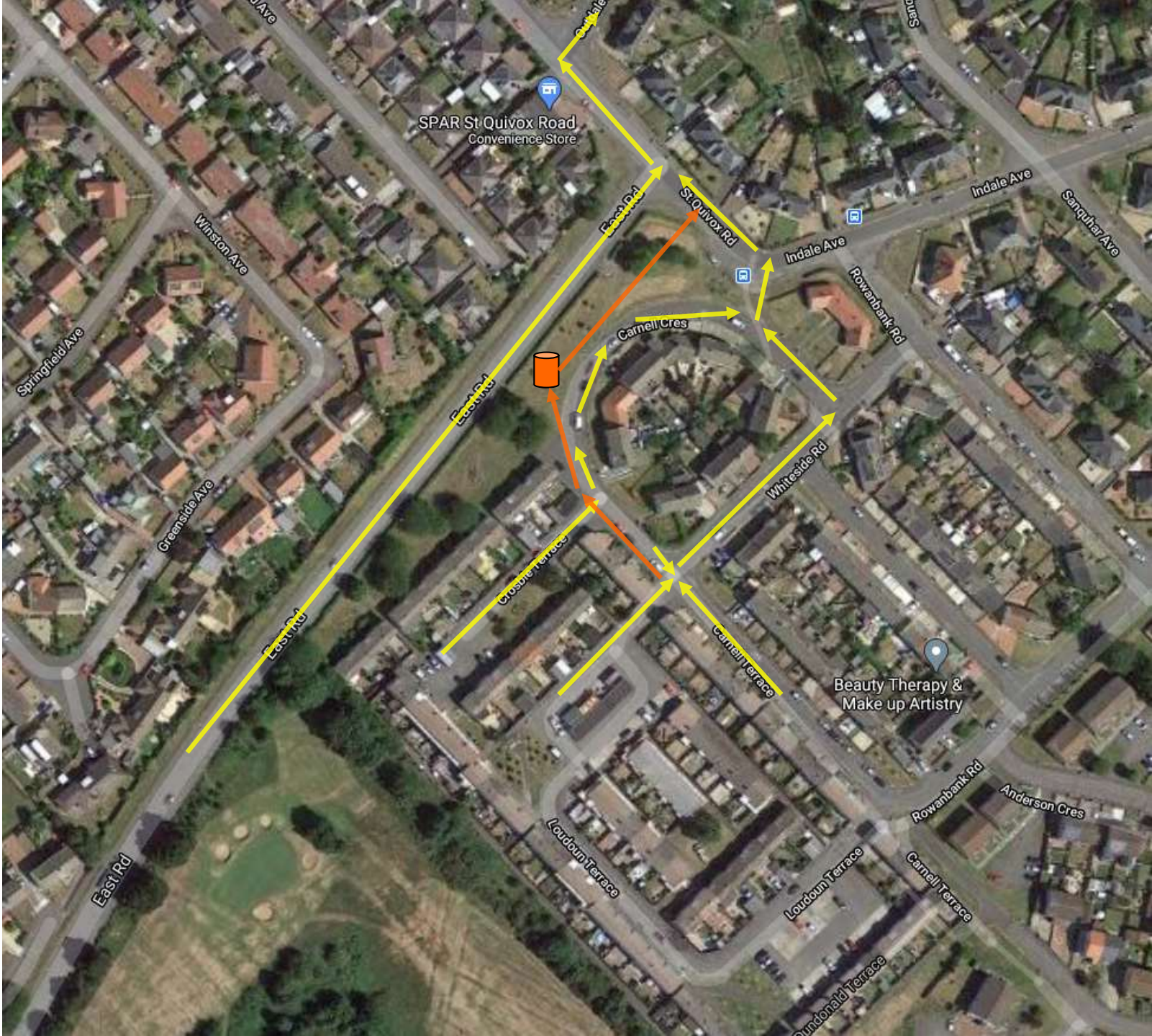
Carnell Crescent

The problem

- Too much water trying to get into network during storms
- Lots of paved areas
- Local and network-wide incapacity
- Road flooding

Option descriptions

1. Local storage (+ delaying storm water)
2. Transfer pipeline (+ delaying storm water)



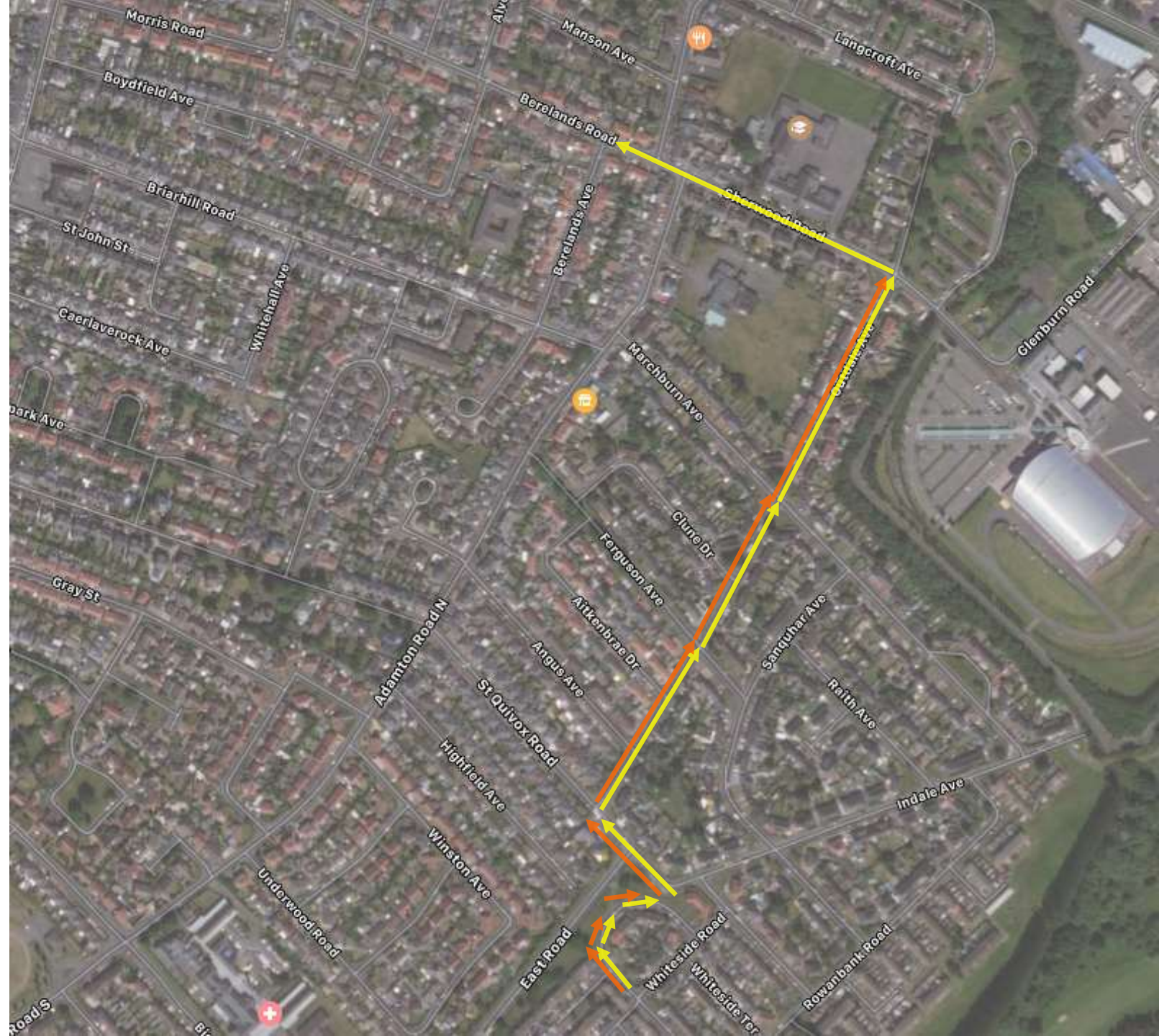
Carnell Crescent

The problem

- Too much water trying to get into network during storms
- Lots of paved areas
- Local and network-wide incapacity
- Road flooding

Option descriptions

1. Local storage (+ delaying storm water)
2. Transfer pipeline (+ delaying storm water)



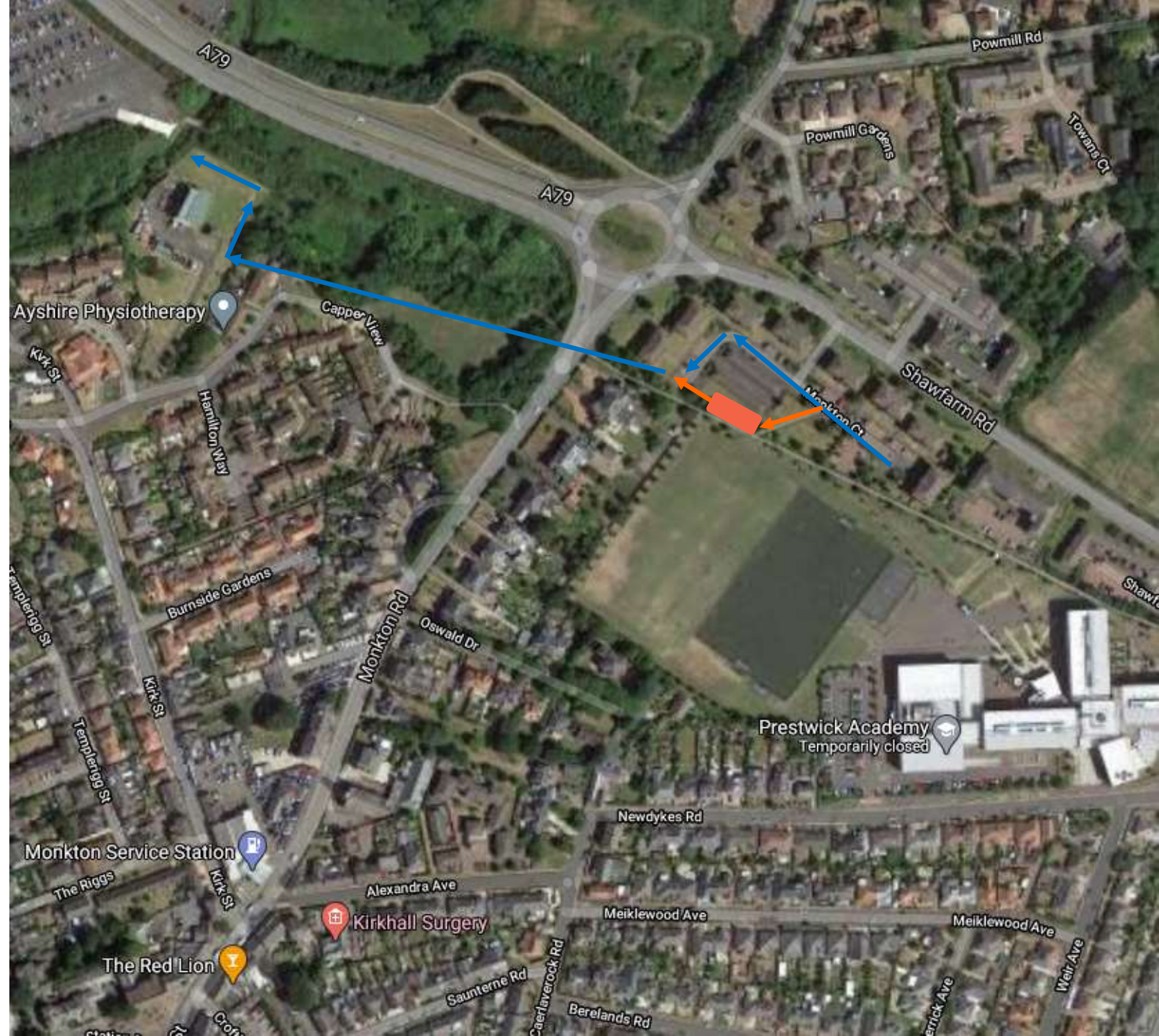
Macintyre Road

The problem

- Surface water network doesn't have capacity for larger storms
- Road flooding

Option description

Slowing down the water in the storm network



An aerial photograph of a city, likely Seattle, showing a dense urban grid, a large body of water (Puget Sound) on the left, and an airport (Seattle-Tacoma International Airport) on the right. The text "Forming the preferred solution" is overlaid in the center.

**Forming the
preferred solution**

Strategic project progression

February
2020

- Longlist agreed

June 2020

- Shortlist agreed

October
2020

- Update on development of shortlist

February
2021

- Forming the preferred solution

Long list – February 2020

Zone	Long list item
A – West of Railway	Preventing and slowing entry of surface water
	Pass-forward and storage (Esplanade)
	Pass-forward and storage (Parking and pool area)
B – East of Railway (north)	Preventing and slowing entry of surface water (roads)
	Preventing and slowing entry of surface water (roof and parking)
	Transfer to Pow Burn catchment
	Pass-forward to zone A (Links Road)
	Pass-forward to zone A (Bridge Street)
	Below ground storage in zone B
C – East of Railway (south)	Preventing and slowing entry of surface water (park)
	Preventing and slowing entry of surface water (road)
	Transfer to Pow Burn catchment
	Below ground storage (combined sewage)
	Pass-forward to zone A
Catchment wide	Preventing and slowing entry of surface water (source control)

Shortlist – June 2020

Zone	Long list item	Take to shortlist
A – West of Railway	Preventing and slowing entry of surface water	Yes
	Pass-forward and storage (Esplanade)	Yes
	Pass-forward and storage (Parking and pool area)	No
B – East of Railway (north)	Preventing and slowing entry of surface water (roads)	Yes
	Preventing and slowing entry of surface water (roof and parking)	Yes
	Transfer to Pow Burn catchment	Yes
	Pass-forward to zone A (Links Road)	No
	Pass-forward to zone A (Bridge Street)	Yes
	Below ground storage in zone B	No
C – East of Railway (south)	Preventing and slowing entry of surface water (park)	Yes
	Preventing and slowing entry of surface water (road)	Yes
	Transfer to Pow Burn catchment	Yes
	Below ground storage (combined sewage)	No
	Pass-forward to zone A	Yes
Catchment wide	Preventing and slowing entry of surface water (source control)	Yes

Progression from the Shortlist since June 2020

Zone	Long list item	Take to shortlist
A – West of Railway	Preventing and slowing entry of surface water	Yes
	Pass-forward and storage (Esplanade)	Yes
	Pass-forward and storage (Parking and pool area)	No
B – East of Railway (north)	Preventing and slowing entry of surface water (roads)	Yes
	Preventing and slowing entry of surface water (roof and parking)	Yes
	Transfer to Pow Burn catchment	Yes
	Pass-forward to zone A (Links Road)	No
	Pass-forward to zone A (Bridge Street)	Yes
	Below ground storage in zone B	No
C – East of Railway (south)	Preventing and slowing entry of surface water (park)	Yes
	Preventing and slowing entry of surface water (road)	Yes
	Transfer to Pow Burn catchment	Yes
	Below ground storage (combined sewage)	No
	Pass-forward to zone A	Yes
Catchment wide	Preventing and slowing entry of surface water (source control)	Yes

Hydraulically linked elements

Orange – Pass-forward and storage on Esplanade

- Storage pipework
- Pipework to convey to storage

Red – Pass-forward from Zone B to A

- New pipe on Kyle Street
- New pipe on Midton Road
- New pipe either side of railway at Bridge Street

Pink – Pass-forward from Zone C to A

- New pipe on Ayr Road
- New pipe on Grangemuir Road
- Kerb drainage on Ayr Road + basin
- Modification to bifurcation on Bank Street
- Modification to downstream end of railway sewer



Orange – Pass-forward and storage on Esplanade

2 x New storage sewers on Promenade

Additional pipework on Marina Road, Burgh Road, Ailsa Street & Park Avenue

Estimated Cost: £3.4m



Red – Pass forward from Zone B to Zone A

Additional Sewer on
Kyle Street, Allanvale
Road & Burgh Road

Upsized replacement
sewer on Midton Road,
Kyle Street Lane & Bridge
Street

Estimated Cost: £1.6m



Pink – Pass Forward from Zone C to Zone A

Upsized replacement
sewer on Ayr Road &
Grangemuir Road

Amendment to sewer
configuration alongside
Railway line

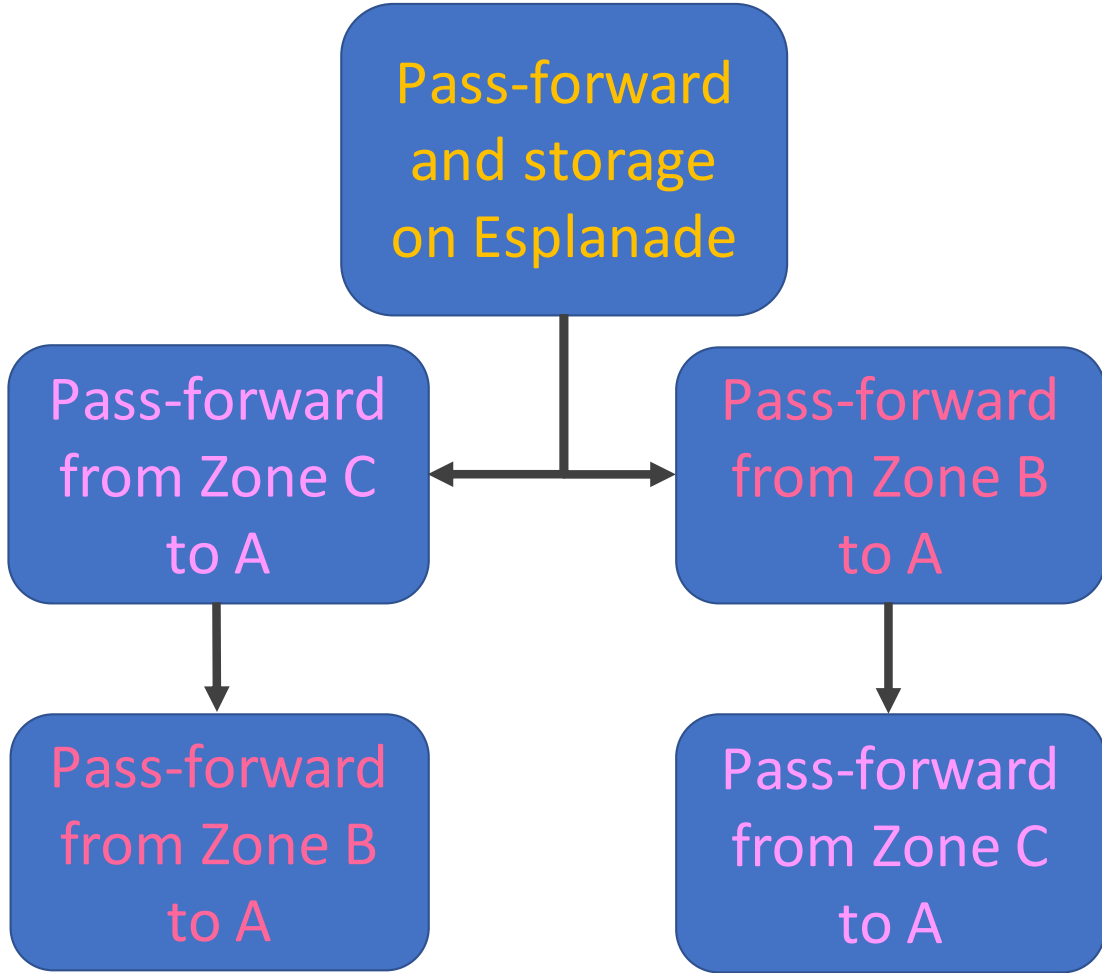
New Sewer from
Grangemuir Road to
Esplanade Storage

Kerb drainage on Ayr
Road

Estimated Cost: £3.9m



Summary of hydraulically linked elements



Standalone shortlist items

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Slowing surface water around Marina Rd and Seabank Rd



Standalone shortlist items

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Slowing surface water around Marina Rd and Seabank Rd

Estimated Cost: £430k



Standalone shortlist items

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Slowing surface water around Marina Rd and Seabank Rd

Estimated Cost: £400k



Standalone shortlist items

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Inhibiting surface water around Marina Rd and Seabank Rd

Estimated Cost: £3.4m



Standalone shortlist items

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Inhibiting surface water around Marina Rd and Seabank Rd

Estimated Cost: £1.2m



Standalone shortlist items

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

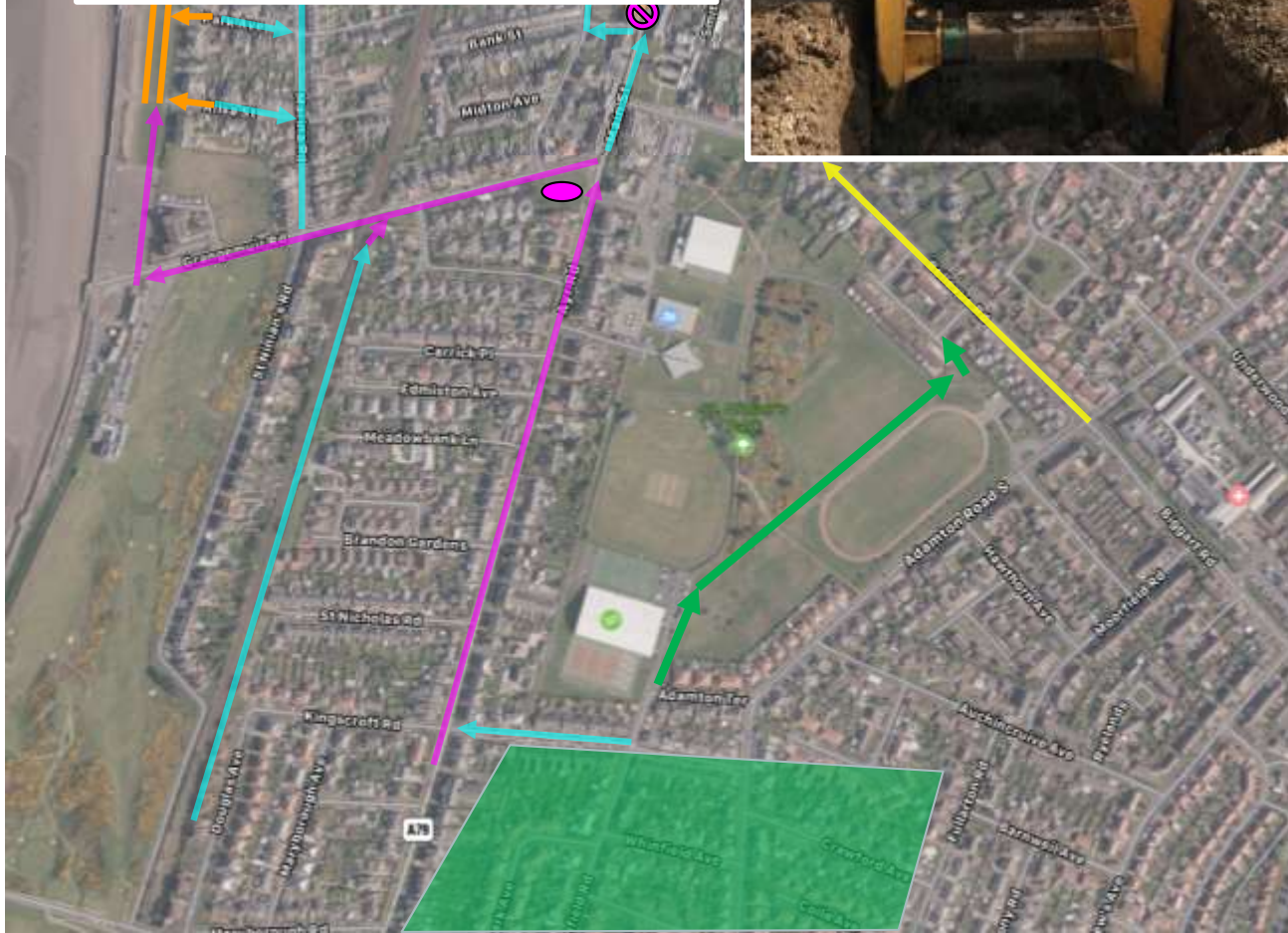
Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Inhibiting surface water around Marina Rd and Seabank Rd

Estimated Cost: £4.3m



Standalone shortlist items

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Inhibiting surface water around Marina Rd and Seabank Rd

Estimated Cost: £1.6m



Overall summary

Hydraulically linked

Orange – Pass-forward and storage on Esplanade

Red – Pass-forward from Zone B to A

Pink – Pass-forward from Zone C to A

Standalone

Green – Standalone items



An aerial photograph of a city, likely Seattle, showing a dense urban grid, a large body of water (Puget Sound) on the left, and an airport (Seattle-Tacoma International Airport) on the right. The word "Prioritisation" is overlaid in the center of the image in a large, bold, black font.

Prioritisation

Summary

Pass-forward and storage on Esplanade

Pass-forward from Zone C to A

Pass-forward from Zone B to A

Inhibiting surface water in St Ninian's Park (roof and road)

Transfer to Pow Burn catchment from Main Street

Inhibiting surface water at Main Street and Midton Road

Inhibiting surface water upstream of Grangemuir Road

Transfer to Pow Burn catchment from Mansfield Rd and inhibiting surface water upstream

Slowing surface water around Marina Rd and Seabank Rd



Assessment Criteria

1. Areas effected by the worst-case flooding
2. Chance of property boundary flooding each year
3. Overall impact of flooding on community

Scores

1 to 5 in the current situation

1 – least impact

5 – highest impact



	Areas effected by worst-case flooding	Score
Zone A Seabank Road Marina Road	Small number of external, couple of roads	1
Zone B Main Street Midton Road Kyle Street	Some internal, a few external and multiple roads	4
Zone C Ayr Road Brandon Gardens St Nicholas Road Carrick Place Grangemuir Road Mansfield Road	Some internal, multiple external and multiple roads	5



	Areas effected by worst-case flooding	Score	Chance of property boundary flooding in a year	Score
Zone A Seabank Road Marina Road	Small number of external, couple of roads	1	50%	2
Zone B Main Street Midton Road Kyle Street	Some internal, a few external and multiple roads	4	> 90%	5
Zone C Ayr Road Brandon Gardens St Nicholas Road Carrick Place Grangemuir Road Mansfield Road	Some internal, multiple external and multiple roads	5	> 90%	5



	Areas effected by worst-case flooding	Score	Chance of property boundary flooding in a year	Score	Impact of flooding on community
Zone A Seabank Road Marina Road	Small number of external, couple of roads	1	50%	2	
Zone B Main Street Midton Road Kyle Street	Some internal, a few external and multiple roads	4	> 90%	5	
Zone C Ayr Road Brandon Gardens St Nicholas Road Carrick Place Grangemuir Road Mansfield Road	Some internal, multiple external and multiple roads	5	> 90%	5	

	Areas effected by worst-case flooding	Score	Chance of property boundary flooding in a year	Score	Impact of flooding on community	Total score
Zone A Seabank Road Marina Road	Small number of external, couple of roads	1	50%	2		
Zone B Main Street Midton Road Kyle Street	Some internal, a few external and multiple roads	4	> 90%	5		
Zone C Ayr Road Brandon Gardens St Nicholas Road Carrick Place Grangemuir Road Mansfield Road	Some internal, multiple external and multiple roads	5	> 90%	5		

An aerial photograph of a city, likely Seattle, showing a dense urban grid, a large body of water (Puget Sound) on the left, and an airport (Seattle-Tacoma International Airport) on the right. The word "Summary" is overlaid in the center.

Summary

Strategic project progression

February
2020

- Longlist agreed

June
2020

- Shortlist agreed

October
2020

- Update on development of shortlist

February
2021

- Forming the preferred solution

May/Jun
2021

- Agree preferred solution

An aerial photograph of a city, likely Seattle, showing a dense urban grid, a large body of water (Puget Sound) on the left, and an airport (Seattle-Tacoma International Airport) on the right. The text is overlaid in the center of the image.

**Conclusions, action
planning and round-up**