

Overview

version 1.2 | 17 October 2022

[digital version with links recommended](#)

We have produced this document to help the public and other parties understand what we maintain and why.

We have taken an evidence-based approach using detailed hydraulic modelling. Flooding in Rhyl and Prestatyn is complex and can be from many sources. While river maintenance generally reduces flood risk, there are places where channel maintenance in one area could make flooding worse in another area.

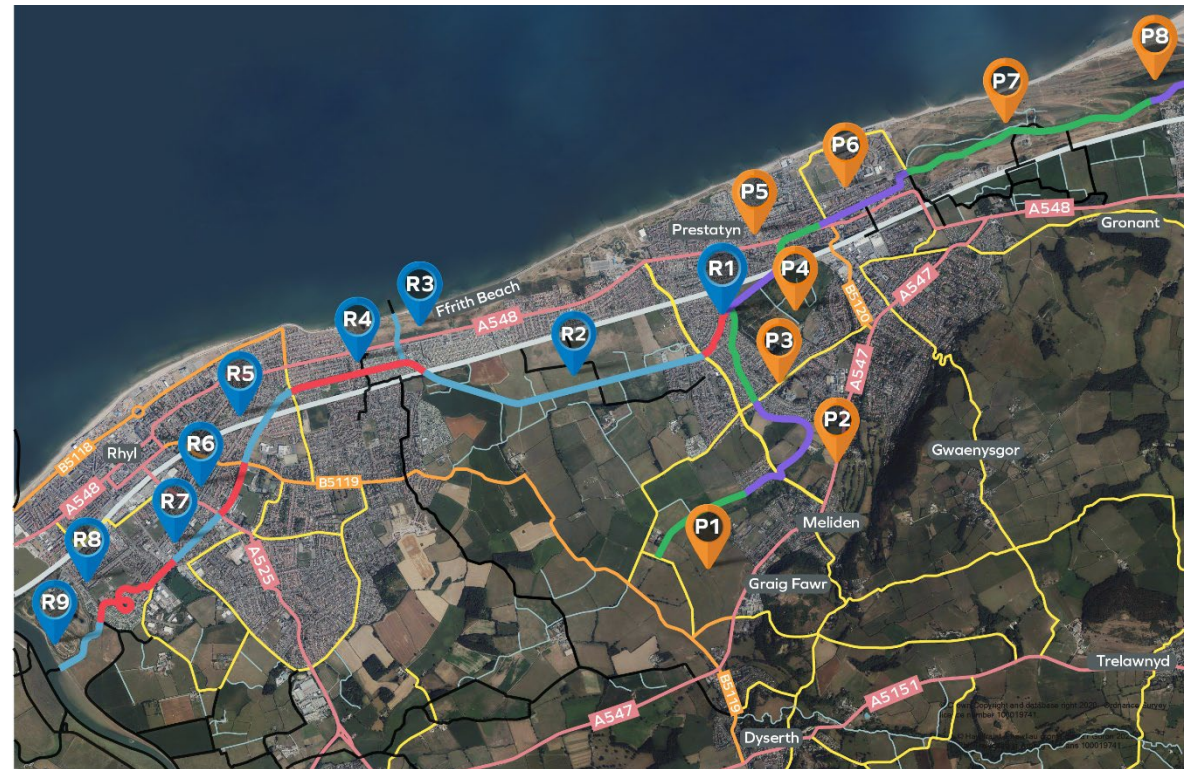
Rhyl Cut and Prestatyn Gutter are split into reaches and each reach has a separate maintenance summary sheet. Public safety measures on NRW structures will be inspected annually and maintained or improved as necessary.

[maintenance responsibilities](#)

[incident reporting and flood risk info](#)

[riverbed level management](#)

Reach	Location
R1	Prestatyn Gutter confluence to Ffordd Penrhwylyfa
R2	Ffordd Penrhwylyfa to Maes Gwilym
R3	Rhyl Pumping Station leg
R4	Railway culvert to Tynewedd Road
R5	Tynewydd Road to Grange Road
R6	Grange Road to Vale Road
R7	Vale Road to Ffordd Las
R8	Ffordd Las to Rhyl outfall sluice
R9	Rhyl outfall sluice to River Clwyd
P1	Rhyd Farm to Pwll-Y-Bont
P2	Pwll-Y-Bont to Fforddisa
P3	Fforddisa to Rhyl Cut confluence
P4	Rhyl Cut to Sandy Lane railway culvert
P5	Sandy Lane railway culvert to Bastion Road
P6	Bastion Road to Barkby Avenue
P7	Barkby Avenue to Gronant Pumping Station
P8	Gronant Pumping Station to coast



Maintenance Responsibilities

Natural Resources Wales is the risk management authority for 'main rivers'. Main rivers are usually larger streams and rivers, but some of them are small watercourses of significance ([main river map](#)). All other watercourses are classed as 'ordinary watercourses'. The Local Authority has a similar role for 'ordinary watercourses'.

If you own property alongside a watercourse, the likelihood is you are a 'riparian owner'. Responsibilities of riparian owners include: maintaining riverbeds and banks, allowing the flow of water to pass without obstruction, and controlling invasive species such as Japanese knotweed.

[A guide to your rights and responsibilities of riverside ownership in Wales](#)

NRW can utilise Permissive Powers under the Water Resources (1991) Act to carry out maintenance, improvement, or construction work for the purpose of managing flood risk. The decision to utilise permissive powers depends on a number of factors, including: property numbers at risk, mechanisms of flooding (frequency, depth, speed of inundation etc.), environmental impact, and local and national strategy & guidance. NRW will often remove large blockages from main river channels, and we request that the public report major blockages. NRW will also manage invasive non-native species (INNS) where there is an impact on flood risk maintenance. All necessary licences and permits will be obtained.

The responsibility for a selection of other maintenance activities and incidents that we do not deal with are highlighted below.

Maintenance Activity	Responsibility
Clearance of drains/ditches	Riparian landowner
River erosion	Riparian landowner
Litter picking	Landowner or Denbighshire County Council
Dog mess	Landowner or Denbighshire County Council
Amenity vegetation management	Landowner or Denbighshire County Council
Other outfall maintenance	Asset owner (Dŵr Cymru Welsh Water, Denbighshire County Council, private)

Incidents We Do <u>Not</u> Deal With
<ul style="list-style-type: none"> • road and highway drainage maintenance • blocked domestic drains and sewers • burst water mains • discolouration or other drinking water problems • fly-tipping of household rubbish • vermin and infestations • dead animals (unless potentially leading to flooding) • domestic noise nuisance • odours from domestic or small commercial premises • burning of domestic or garden waste • smoke emissions from vehicles

Incident Reporting

During a Flood

- Call 999 if you are in danger
- Check the [latest situation on our live flood map](#) or call Floodline on [0345 955 1188](#)
- Find out [what to do before during and after a flood](#)

To Report an Environmental Incident

- Call us on [0300 065 3000](#) 24 hours day, or
- Email us at icc@naturalresourceswales.gov.uk

Flood Risk Information

naturalresources.wales/about-us/contact-us/report-an-environmental-incident

[Natural Resources Wales / Check flood warnings](#)

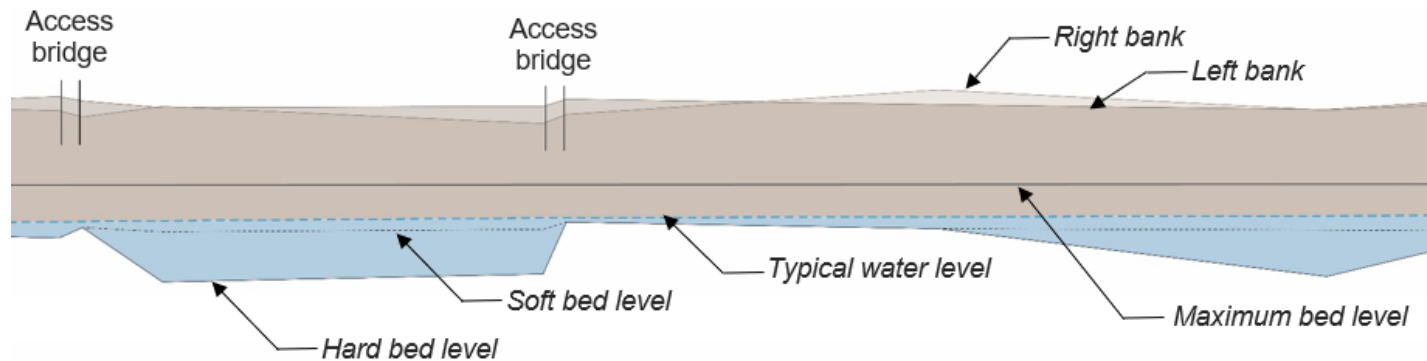
[Prestatyn and East Rhyl - Flood warnings and alerts \(naturalresources.wales\)](#)

Note that the **flood warning service only includes tidal flood risk** and not risk of fluvial flooding (from watercourses) or surface water flooding.

Riverbed Level Management

We have completed modelling of a range of riverbed levels from the lowest to the highest levels recorded since the 1960s. Property flooding is sensitive to riverbed levels in some places, while in other areas bed levels have no significant impact on main river flooding and raised bed levels can even reduce flood risk downstream.

A long section is provided on the maintenance summary sheet for each reach (except R3 and P8 where not available). See example long section below with key features. The right and left bank are as viewed when looking downstream.



Current soft riverbed levels (top level of soft silt/sand) and hard riverbed levels (top level of hard gravels/rock) are generally based on the most recent topographical survey undertaken in 2018, with older data used to infill gaps. The long sections may therefore not be fully up to date, but a selection of spot checks was undertaken at key locations in 2021.

The maximum bed level is the highest level that the surface of the soft bed can reach before there is a significant impact on flooding of properties. We will monitor riverbed levels and will plan removal of riverbed material when the maximum bed level is reached.

In many places drainage into the watercourses could be affected by silt levels. In these locations, the maximum bed level is often set by the invert level of outfalls. The main outfalls into the watercourses are shown on the long sections but not all outfalls have been surveyed.

For information about dredging and deshoaling [click here](#).

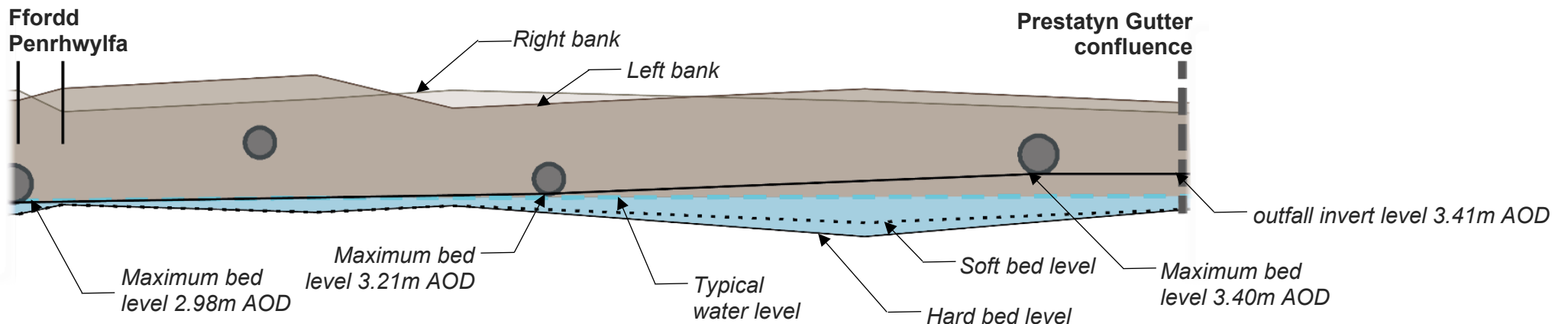
Rhyl Cut R1

Prestatyn Gutter confluence to Ffordd Penrhwyfya

Main River Flood Risk Summary	The river generally flows towards Ffordd Penrhwyfya and on to Rhyl pumping station, but can discharge through a flapped outfall into Prestatyn Gutter. There is no significant flood risk to properties from Rhyl Cut in this reach.
Current River Condition	The river is currently in good (if unnatural) condition with channel clearance undertaken relatively frequently.
Maintenance Impacts	Maintaining the river channel in this reach has minimal impact on main river flooding but drainage could be affected by silt levels. The flap valve at the confluence will continue to be maintained in case of an exceptional situation when the water level in Rhyl Cut gets higher than in Prestatyn Gutter.



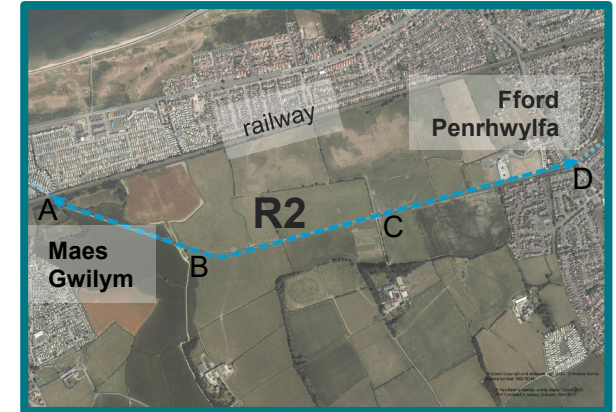
NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	bird nesting, water vole habitat	partial clearance 5 yearly or as required for silt clearance
bankside tree and hedge management	bird nesting, bats	5 yearly or as required for silt clearance
confluence flap valve greasing and clearance	bird nesting, water vole habitat	annually (Jan/Feb)
<u>riverbed level management</u>	fish spawning, water vole habitat	annual monitoring



Rhyl Cut R2

Ffordd Penrhwydfa to Maes Gwilym

Main River Flood Risk Summary	There is no significant flood risk to properties from Rhyl Cut but there is flooding of farmland, in particular to the south of the cut. Properties around Maes-Y-Gog and Lon Hedyn are at risk of flooding from Maes Gwilym (MG) drain.
Current River Condition	Rhyl Cut is currently in good (if unnatural) condition with channel clearance undertaken relatively frequently. There can be substantial invasive weed growth. There could be significant benefits if the river was restored to a more natural state. Maes Gwilym drain is currently in reasonably good condition, except for a culvert under the railway which is partially collapsed (see impact below).
Maintenance Impacts	Maintaining the Rhyl Cut in this reach has no significant impact on property flooding from the main river. Reducing maintenance will lead to some additional flooding of farmland to the south and north of the cut. Drainage could be affected by silt levels. Maes Gwilym drain channel vegetation and raised bed levels increase flood risk. Maes Gwilym drain railway culvert increases flood risk downstream and will therefore not be maintained.

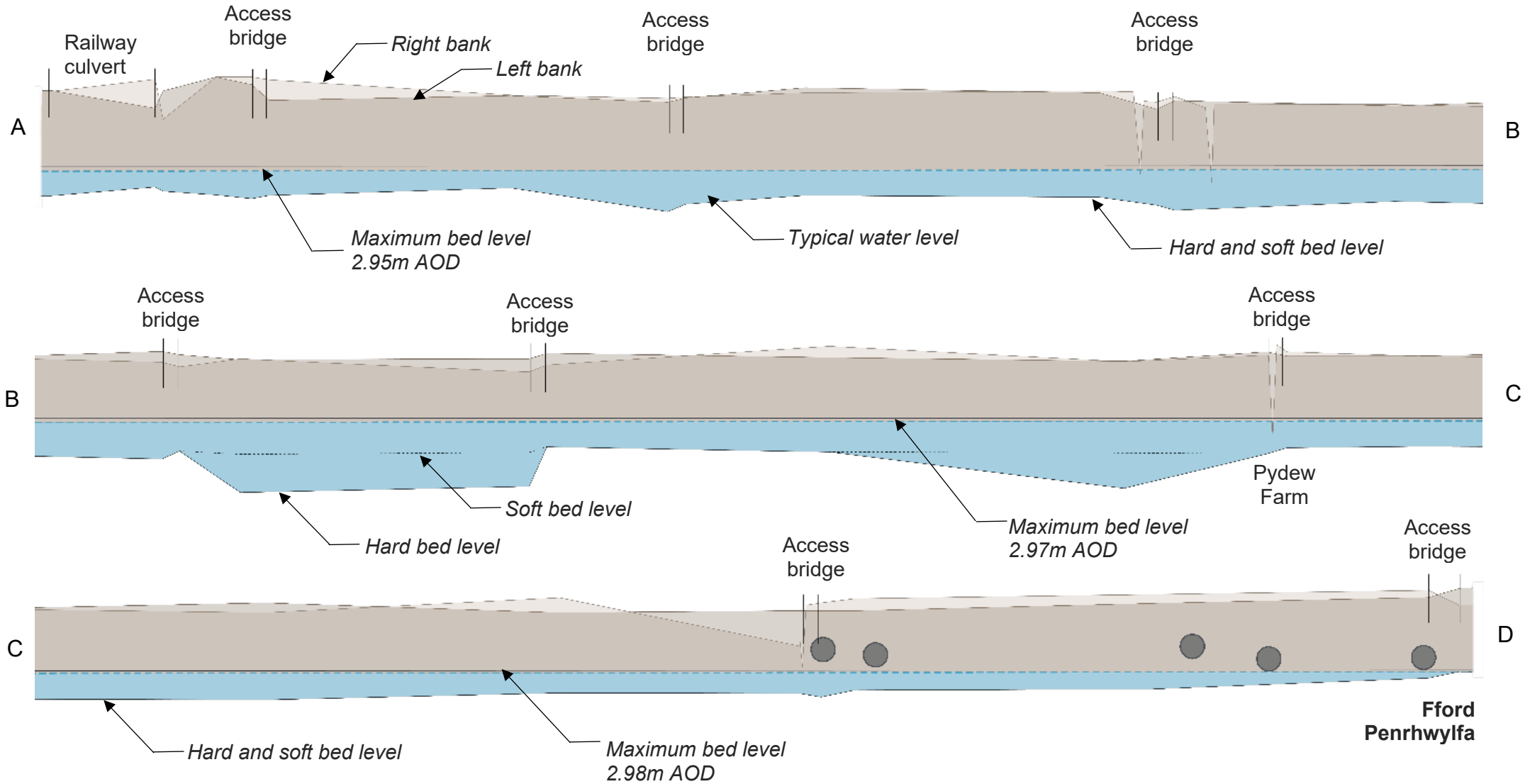


NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	bird nesting, water vole habitat	Rhyl Cut: partial clearance 5 yearly or as required for silt clearance Maes Gwilym drain: partial clearance annually (Sep/Oct)
bankside tree and hedge management	bird nesting, bats	Rhyl Cut: 5 yearly or as required for silt clearance Maes Gwilym drain: annually (Jan/Feb)
channel blockage removal	biosecurity, hazardous waste	Rhyl Cut: not required (riparian responsibility) Maes Gwilym drain: reactively before heavy rain
<u>riverbed level management</u>	fish spawning, water vole habitat	annual monitoring (both watercourses)

No long section available for Maes Gwilym drain. Max bed level to minimise reduction in capacity of culverts and other crossings.

Rhyl Cut R2 Long Section

Maes Gwilym



Rhyl Cut R3

Rhyl Pumping Station leg

Main River Flood Risk Summary	There is no significant risk of flooding from Rhyl Cut in this reach but high water levels could affect properties in reach R4. A few caravans are at risk of flooding during infrequent floods (above approximately 1 in 30 annual chance).
Current River Condition	The river is currently in good condition with channel clearance undertaken relatively frequently. The left hand bore of the Ash Grove culvert upstream is partially blocked but the culvert has spare capacity.
Maintenance Impacts	Rhyl Pumping Station will continue to be operated and maintained (subject to pumping station review and impact of set-back sea defences), as it reduces flood risk to a large area and lots of properties. Maintaining the river channel in this reach has minimal impact on main river flooding but some clearance is required for Rhyl pumping station to operate effectively. Drainage could also be affected by silt levels.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	bird nesting, water vole habitat	partial clearance annually (Sep/Oct)
channel blockage removal	biosecurity, hazardous waste	reactively before heavy rain
Rhyl Pumping Station debris screen clearance	biosecurity, hazardous waste	weekly and before heavy rain
<u>riverbed level management</u>	fish spawning, water vole habitat	annual monitoring

No long section available for Rhyl Pumping Station leg. Max bed level of 2.13m AOD at pumping station culvert inlet (50mm above pumping station debris screen lip); max bed level of 2.32m AOD in at least one pipe of the Ash Grove culvert (200mm above invert).

Rhyl Cut R4

Maes Gwilym to Tynewedd Road

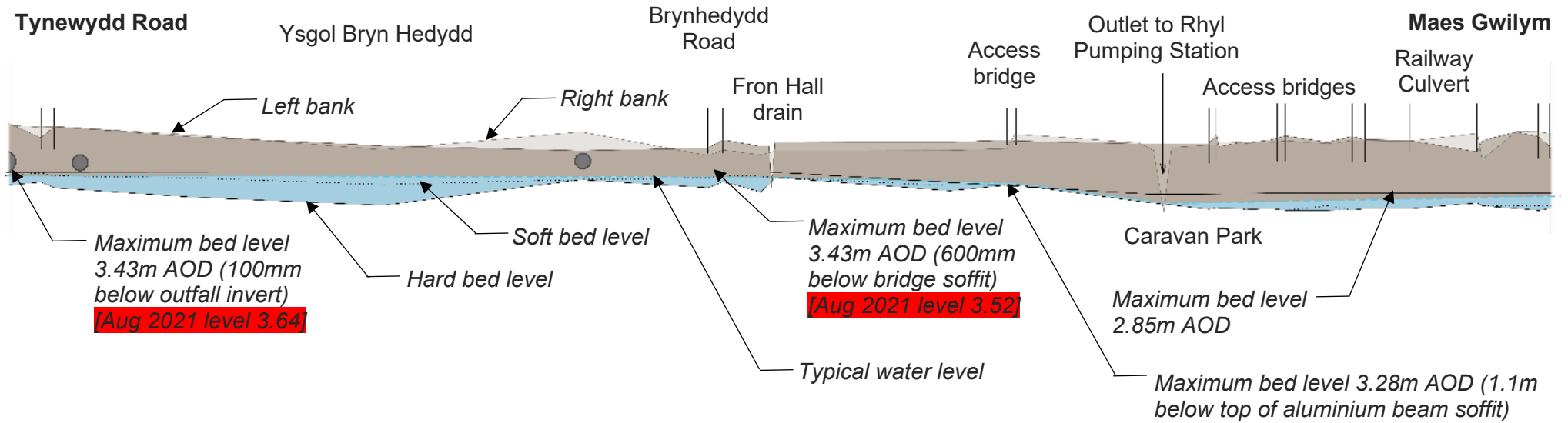
Main River Flood Risk Summary	The highest point of Rhyl Cut is near Brynhedydd Road and can therefore flow in both directions along this reach. Properties near Brynhedydd Road and Edgbaston Road and some caravans are at risk of flooding during infrequent floods (above approximately 1 in 30 annual chance) from both Rhyl Cut and Fron Hall drain.
Current River Condition	This reach of Rhyl Cut and Fron Hall drain are in fair condition but there has been siltation between Tynewydd Road and Brynhedydd Road which requires clearance. Maintenance is difficult due to poor access in some locations along both watercourses.
Maintenance Impacts	Maintaining conveyance along this reach of Rhyl Cut slightly reduces the extent of flooding and reduces peak water levels, which may benefit incoming drainage; drainage could also be affected by silt levels. Channel vegetation and raised bed levels along Fron Hall drain increases flood risk.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	Railway Culvert to Fron Hall drain: partial clearance annually (Sep/Oct) Fron Hall drain to Tynewydd Road: twice annually (Jun/Jul and Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats	Rhyl Cut and Fron Hall drain: annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	Rhyl Cut and Fron Hall drain: reactively before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole habitat	Rhyl Cut and Fron Hall drain: annual monitoring (clearance currently required)

No long section available for Fron Hall drain. Max bed level to minimise reduction in capacity of culverts and other crossings.

Rhyl Cut R4 Long Section



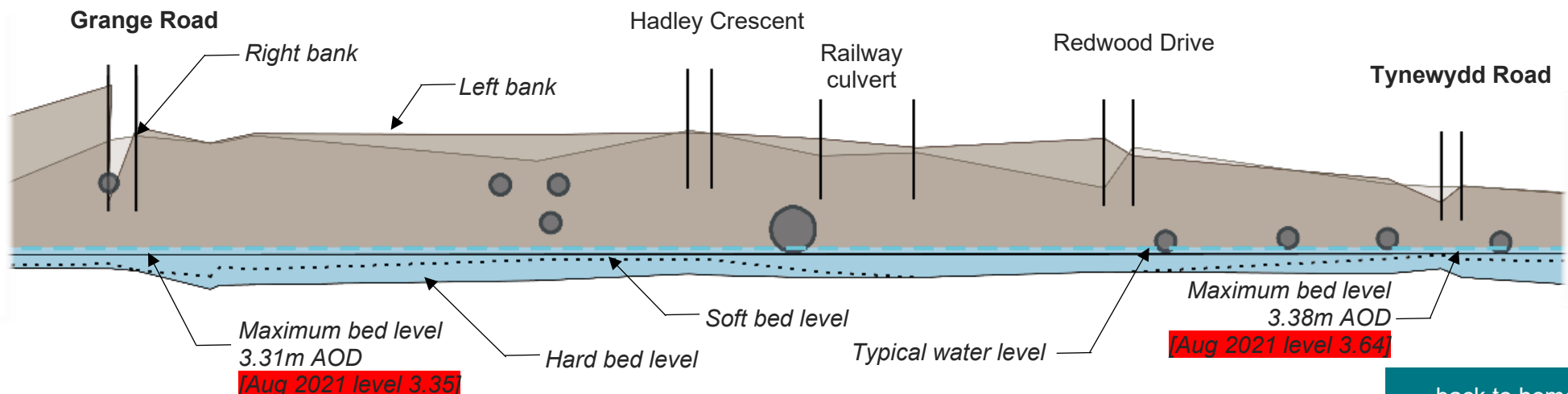
Rhyl Cut R5

Tynewydd Road to Grange Road

Main River Flood Risk Summary	There is no significant risk of flooding from Rhyl Cut in this reach.
Current River Condition	The river is in fair condition along this reach but there has been siltation in places between Tynewydd Road and Grange Road which requires clearance. Maintenance is difficult due to poor access in some locations.
Maintenance Impacts	Maintaining the river channel in this reach has no significant impact on the extent of flooding but does reduce peak water levels, which may benefit incoming drainage; drainage could also be affected by silt levels.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	partial clearance twice annually (Jun/Jul and Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole habitat	annual monitoring (clearance currently required)



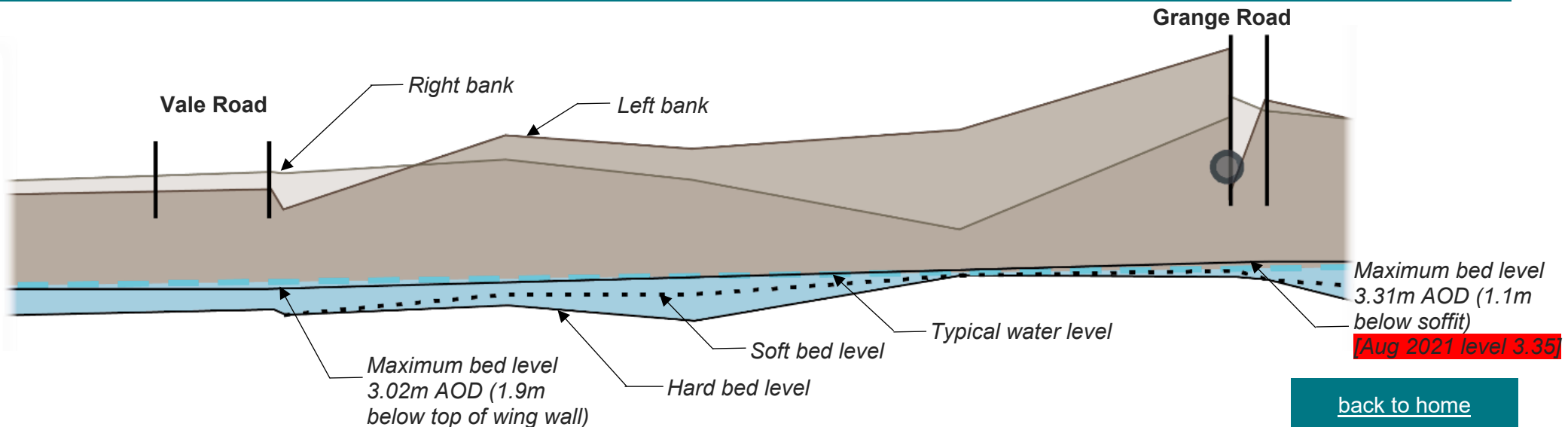
Rhyl Cut R6

Grange Road to Vale Road

Main River Flood Risk Summary	There is no significant risk of flooding from Rhyl Cut along this reach.
Current River Condition	The river is in fair condition along this reach with some siltation downstream of Grange Road. Maintenance is difficult due to poor access in some locations.
Maintenance Impacts	Maintaining the river channel in this reach has no significant impact on the extent of flooding but does reduce peak water levels, which may benefit incoming drainage.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	partial clearance annually (Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
Vale Road debris screen clearance	biosecurity, hazardous waste	fortnightly and before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole habitat	annual monitoring (clearance currently required)



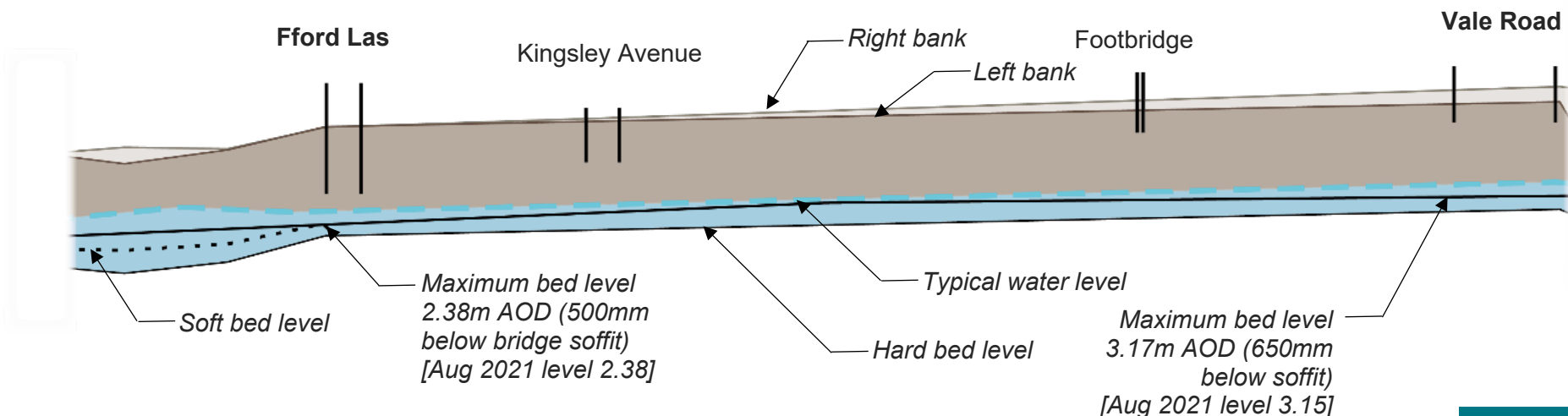
Rhyl Cut R7

Vale Road to Ffordd Las

Main River Flood Risk Summary	Kingsley Avenue and Walford Avenue are at risk of flooding from Rhyl Cut in this reach, and high water levels in Rhyl Cut are likely to affect incoming drainage.
Current River Condition	The river is in fair condition along this reach with some siltation (not shown on survey section). Maintenance is difficult due to poor access in some locations.
Maintenance Impacts	Maintaining conveyance along this reach of Rhyl Cut slightly reduces the extent of flooding and reduces peak water levels, which may benefit incoming drainage; drainage could also be affected by silt levels.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	twice annually (Jun/Jul and Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole habitat	annual monitoring



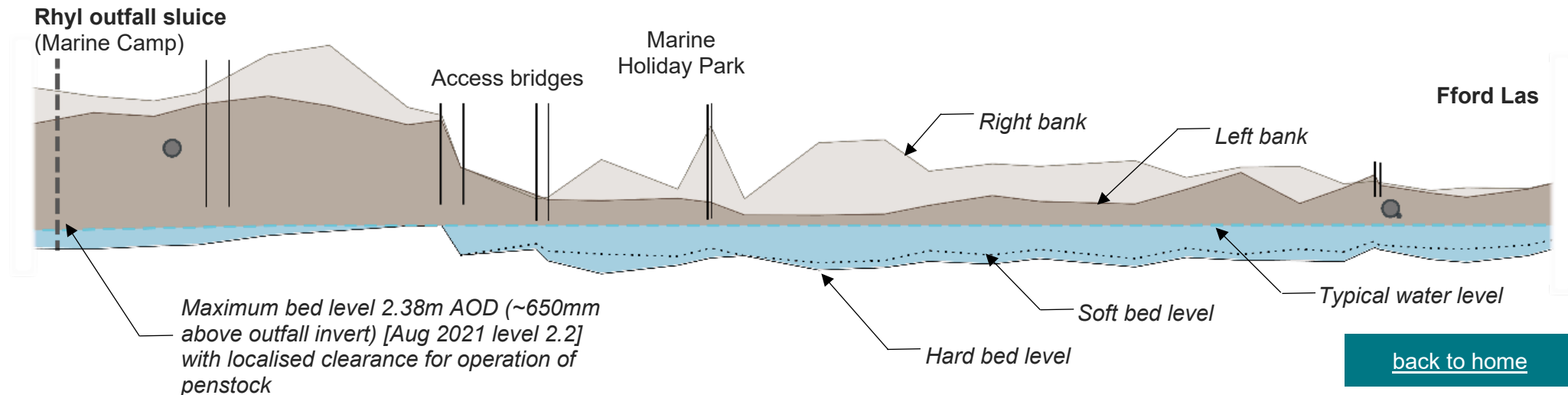
Rhyl Cut R8

Ffordd Las to Rhyl outfall sluice

Main River Flood Risk Summary	There is no significant risk of flooding from Rhyl Cut in this reach.
Current River Condition	The river is in good condition along this reach. Fishponds created upstream of Marine Camp Sluice rely on elevated water levels downstream.
Maintenance Impacts	Maintaining the river channel in this reach has no significant impact on the extent of flooding but slightly reduces peak water levels. Silt levels could affect drainage.



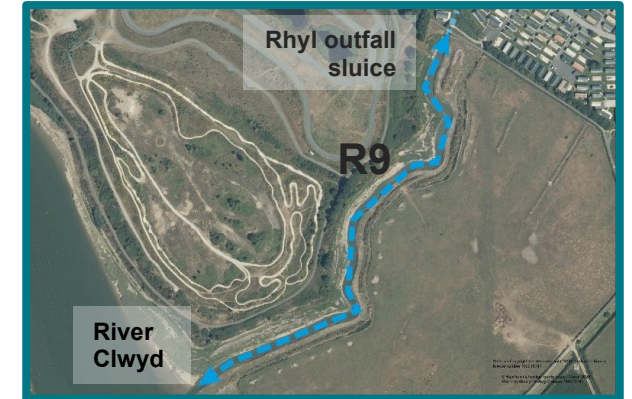
NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	bird nesting, water vole habitat	partial clearance annually (Sep/Oct)
bankside tree and hedge management	bird nesting, bats, badgers	annually (Jan/Feb)
channel blockage removal	biosecurity, hazardous waste	reactively before heavy rain
Clwyd outfall debris screen clearance	biosecurity, hazardous waste	fortnightly and before heavy rain
Clwyd outfall penstock cleaning/greasing	none	annually (Jan/Feb)
<u>riverbed level management</u>	fish spawning, water vole habitat	annual monitoring



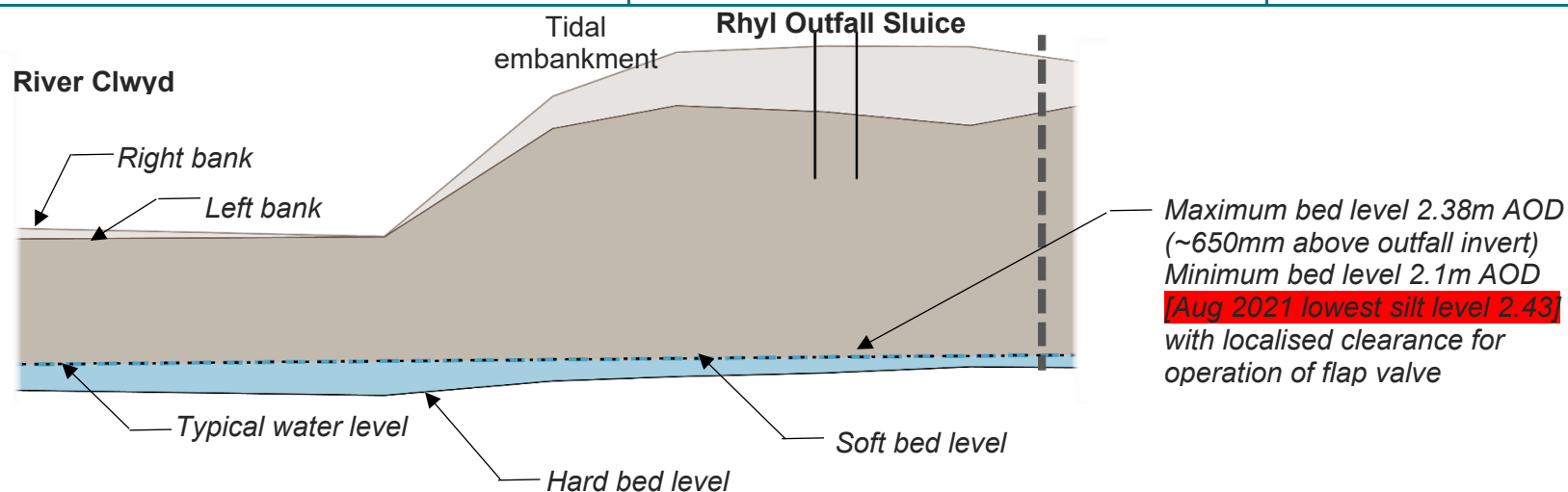
Rhyl Cut R9

Rhyl outfall sluice to River Clwyd

Main River Flood Risk Summary	Reach situated in tidal flood plain.
Current River Condition	The river is in fair condition along this reach but clearance is required. Fishponds created upstream of Marine Camp Sluice rely on elevated water levels downstream.
Maintenance Impacts	Siltation of the channel in this reach due to tidal ingress has a significant impact on water levels upstream. Minimum bed level ~2.1m AOD to avoid draining ponds.



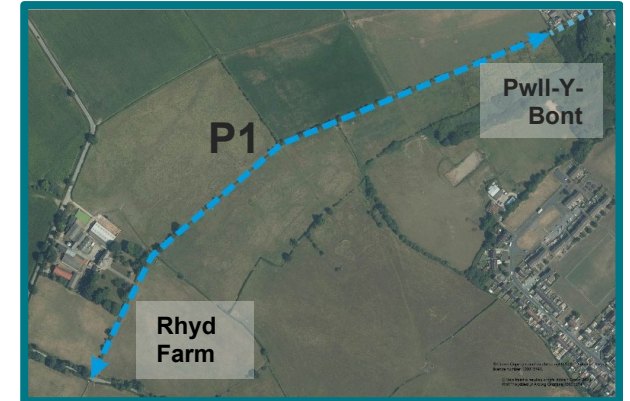
NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	annually (Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats, badgers	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
Clwyd outfall tidal debris screen clearance	biosecurity, hazardous waste	quarterly monitoring and reactively before high tides
Clwyd outfall flap valve greasing and clearance	fish spawning, biosecurity	annually (Jan/Feb)
<u>riverbed level management</u>	safe access, fish spawning, SSSi	annual monitoring (clearance currently required)



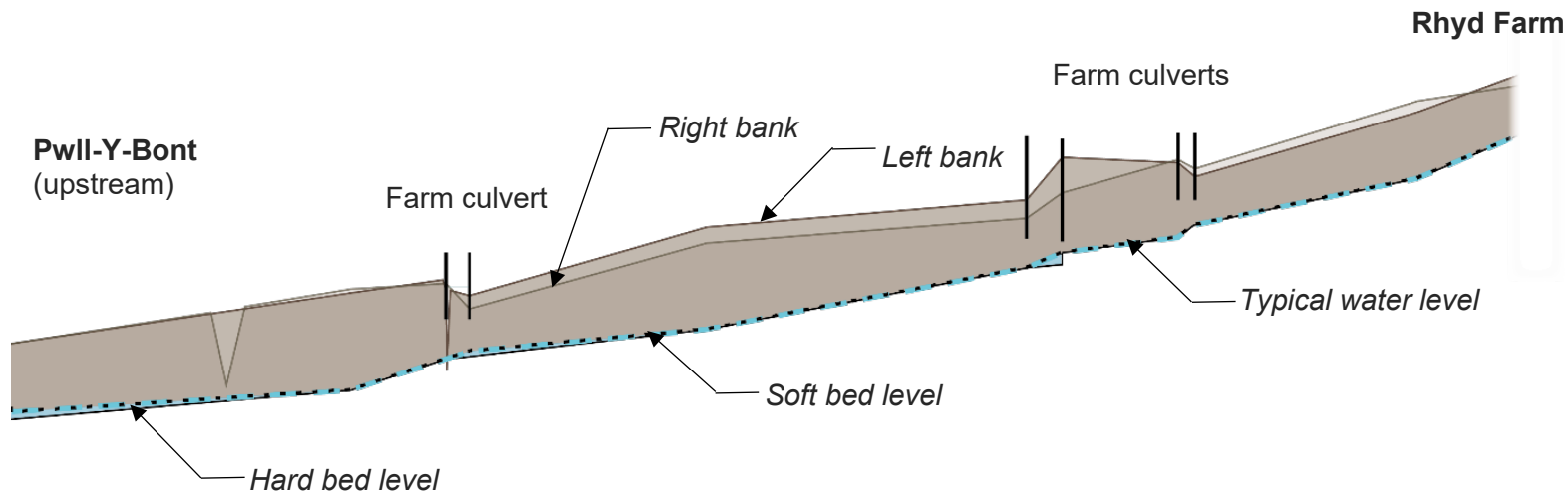
Prestatyn Gutter P1

Rhyd Farm to Pwll-Y-Bont

Main River Flood Risk Summary	There is no flood risk to properties from Prestatyn Gutter in this reach, with some short-duration localised flooding of farmland.
Current River Condition	The river is in fair condition but could be restored to a more natural state to reduce flood risk downstream.
Maintenance Impacts	Maintaining the river channel in this reach has no impact on property flooding in this area and could increase the risk of flooding downstream.



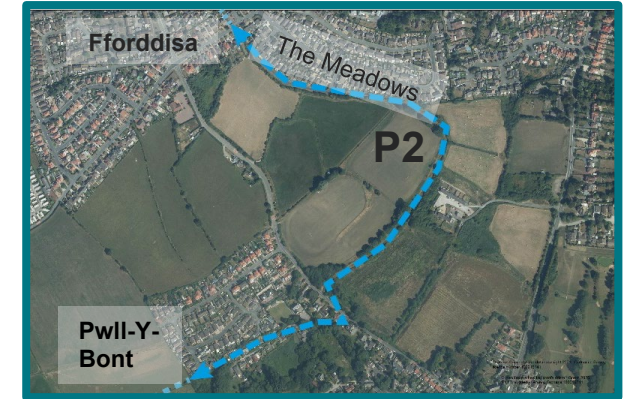
NRW Maintenance Activity	Main Constraints	Frequency
none	n/a	n/a



Prestatyn Gutter P2

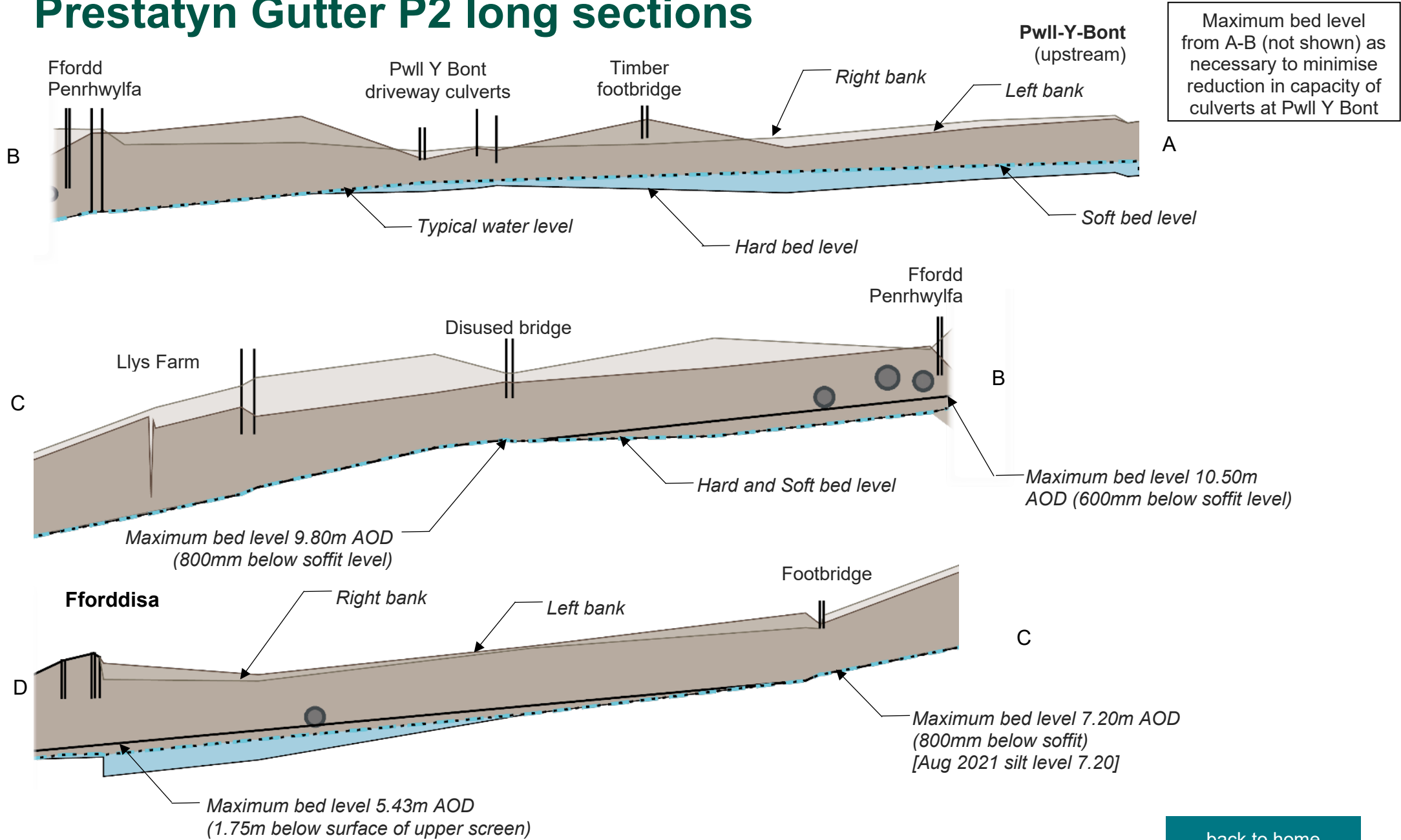
Pwll-Y-Bont to Fforddisa

Main River Flood Risk Summary	Pwll-Y-Bont, Heather Crescent and The Meadows are at significant risk of flooding from Prestatyn Gutter and surface water. There is a 1 in 5 annual chance of some fluvial flooding in these areas. High river levels could also exacerbate surface water flooding in various places including the Llys Farm development.
Current River Condition	The river is generally in good condition along this reach, with some localised siltation around driveway culverts at Pwll Y Bont and the footbridge at The Meadows.
Maintenance Impacts	Maintaining the river channel in this reach (downstream of timber footbridge) is important to minimise flood risk, especially at Pwll-Y-Bont and The Meadows. Maintenance is less critical between Ffordd Penrhwyfya and The Meadows.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	Ffordd Penrhwyfya to The Meadows: partial clearance annually (Sep/Oct) all other areas: twice annually (Jun/Jul and Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
Fforddisa debris screen clearance	biosecurity, hazardous waste	weekly and before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole habitat	annual monitoring

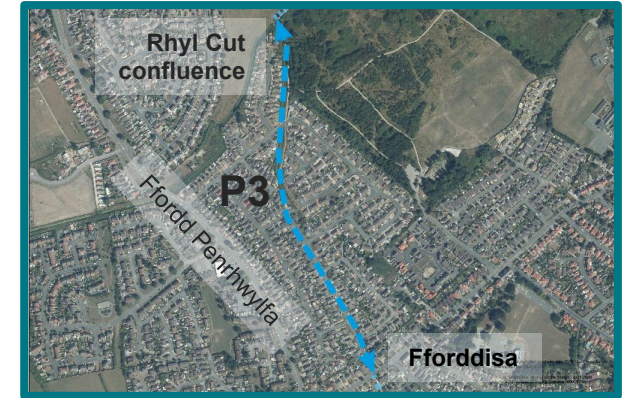
Prestatyn Gutter P2 long sections



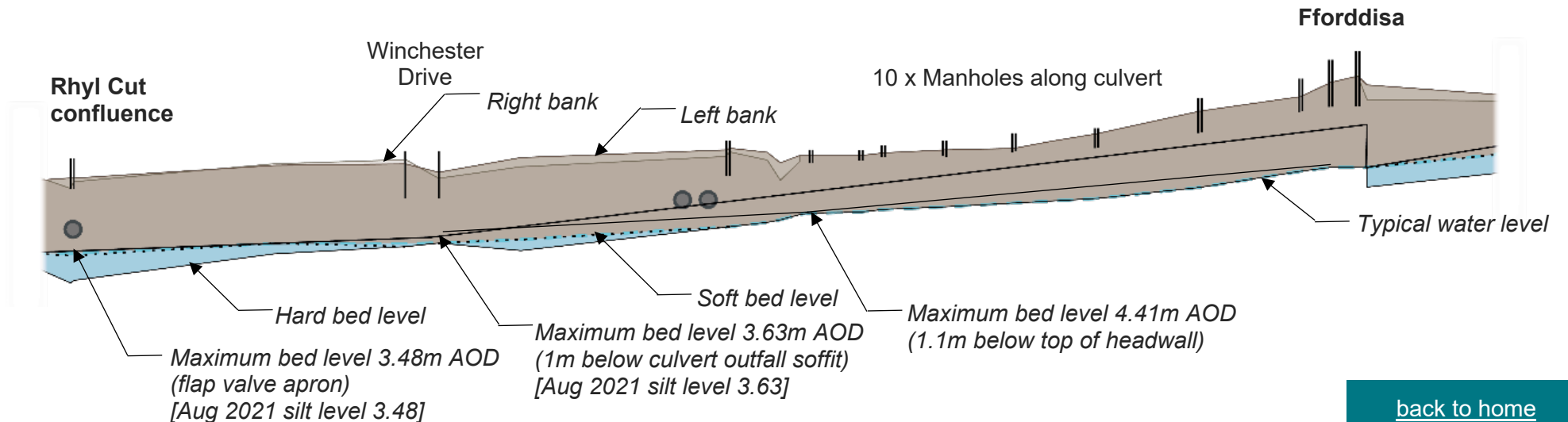
Prestatyn Gutter P3

Fforddisa to Rhyl Cut confluence

Main River Flood Risk Summary	Properties around Winchester Drive are at significant risk of flooding from Prestatyn Gutter. Properties around Chichester Drive and Bangor Crescent are also at risk.
Current River Condition	The river and culvert are generally in good condition along this reach, with some localised siltation from Fforddisa culvert to Rhyl Cut confluence.
Maintenance Impacts	Maintaining the river channel in this reach is important to minimise flood risk in this area and also upstream along P2.



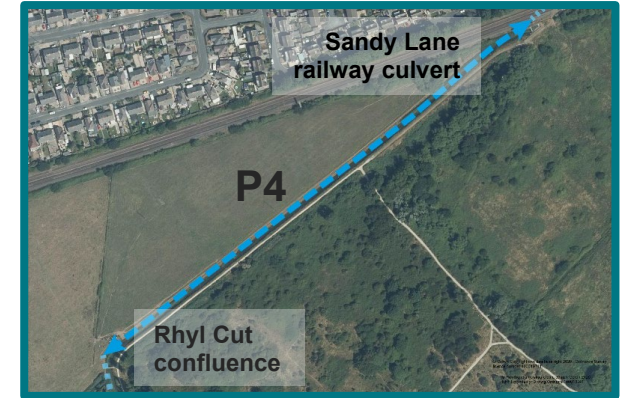
NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation (right bank only) and weed clearance	bird nesting, water vole habitat	twice annually (Jun/Jul and Sep/Oct)
bankside tree and hedge management	bird nesting, bats	annually (Jan/Feb)
channel blockage removal	biosecurity, hazardous waste	reactively before heavy rain
Canterbury Drive security screen clearance	biosecurity, hazardous waste	reactively as necessary
<u>riverbed level management</u>	fish spawning, water vole habitat	annual monitoring



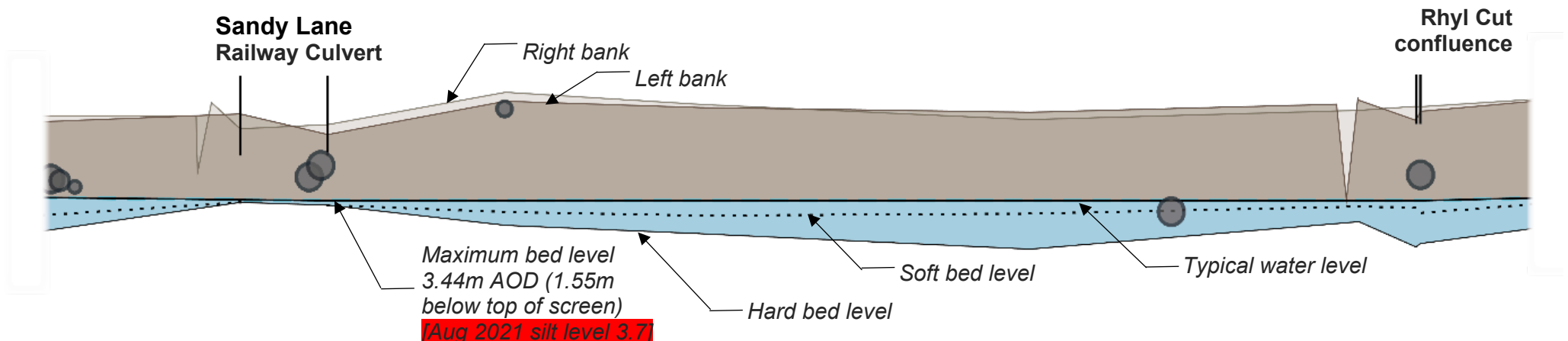
Prestatyn Gutter P4

Rhyl Cut to Sandy Lane railway culvert

Main River Flood Risk Summary	There are no properties along this reach but high water levels in Prestatyn Gutter can increase flood risk upstream along P3.
Current River Condition	The river is in fair condition with some siltation along the whole reach, which may require clearance up to and including the railway culvert (subject to assessment).
Maintenance Impacts	Maintaining the river channel in this reach is relatively important to minimise flood risk upstream along P3, as raised water levels slightly increase levels upstream.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	partial clearance annually (Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
railway culvert debris screen clearance	biosecurity, hazardous waste	fortnightly and before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole habitat	annual monitoring (clearance currently required)

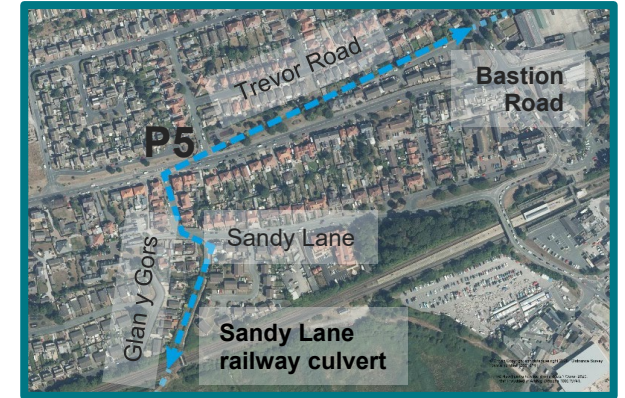


Survey and assessment of railway culvert required to confirm max bed levels (in conjunction with Network Rail)

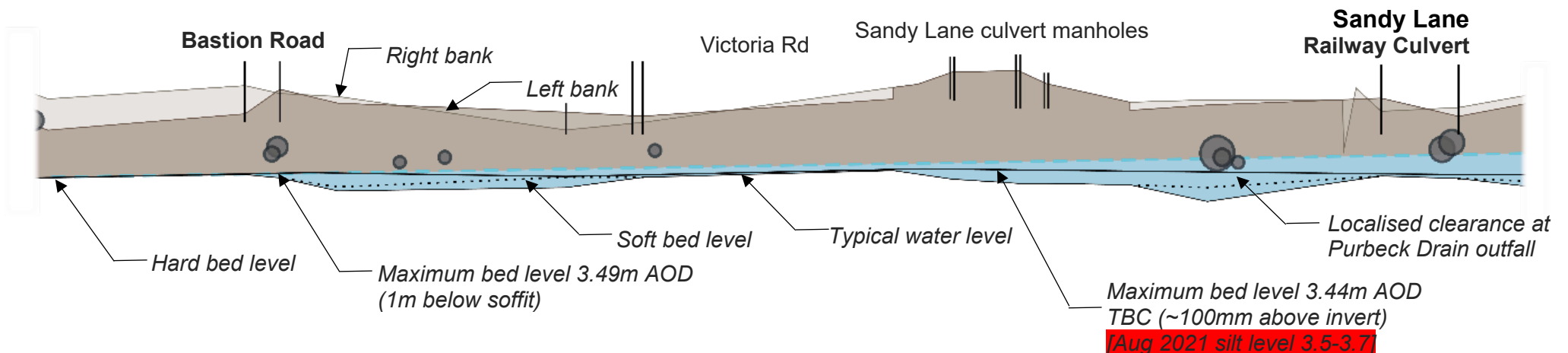
Prestatyn Gutter P5

Sandy Lane Railway Culvert to Bastion Road

Main River Flood Risk Summary	Properties around Glan y Gors and Trevor Road are at significant risk of flooding from Prestatyn Gutter, surface water, and railway drainage (Glan y Gors only).
Current River Condition	The river is in fair condition along this reach, with some siltation around Sandy Lane, which may require clearance (subject to survey and assessment).
Maintenance Impacts	Maintaining the river channel in this reach is important to minimise flood risk, although vegetation growth only has a small impact on flood extent and water levels.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole habitat	partial clearance annually (Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
Sandy Lane / Victoria Rd debris screen clearance	biosecurity, hazardous waste	weekly and before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole habitat	annual monitoring (clearance currently required)



Survey and assessment of Sandy Lane culvert required to confirm max bed levels

[back to home](#)

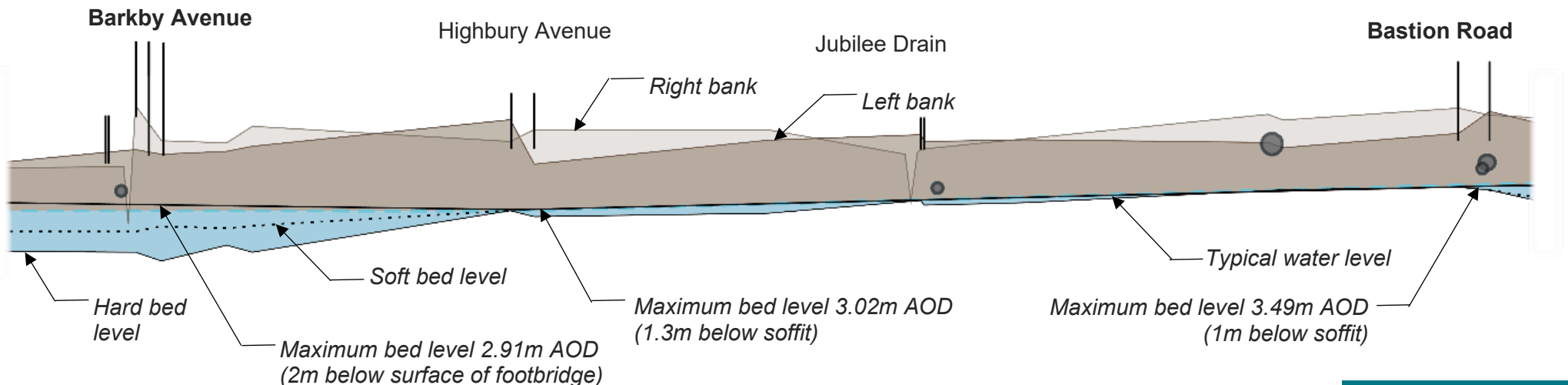
Prestatyn Gutter P6

Bastion Road to Barkby Avenue

Main River Flood Risk Summary	There are no properties at significant risk of flooding from Prestatyn Gutter, but the Pontins Holiday Park could be affected by infrequent floods (above approximately 1 in 30 annual chance). Jubilee Drain not modelled.
Current River Condition	The river is generally in good condition along this reach.
Maintenance Impacts	Maintaining the river channel in this reach is important to minimise flood risk in this area and upstream in P5.



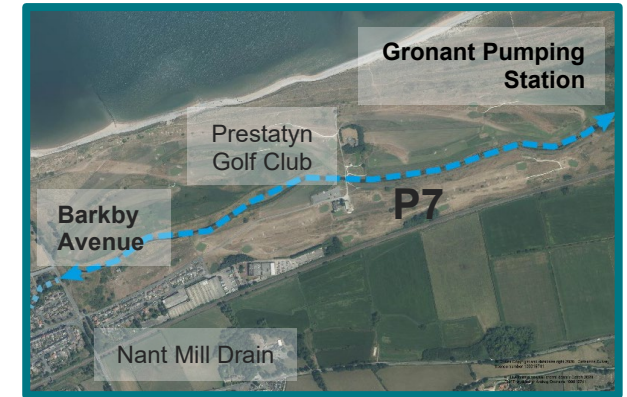
NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	access, bird nesting, water vole, lizards, Natterjack toads	partial clearance annually (Sep/Oct)
bankside tree and hedge management	access, bird nesting, bats, lizards, Natterjack toads	annually (Jan/Feb)
channel blockage removal	access, biosecurity, hazardous waste	reactively before heavy rain
<u>riverbed level management</u>	access, fish spawning, water vole, lizards, Natterjack toads	annual monitoring



Prestatyn Gutter P7

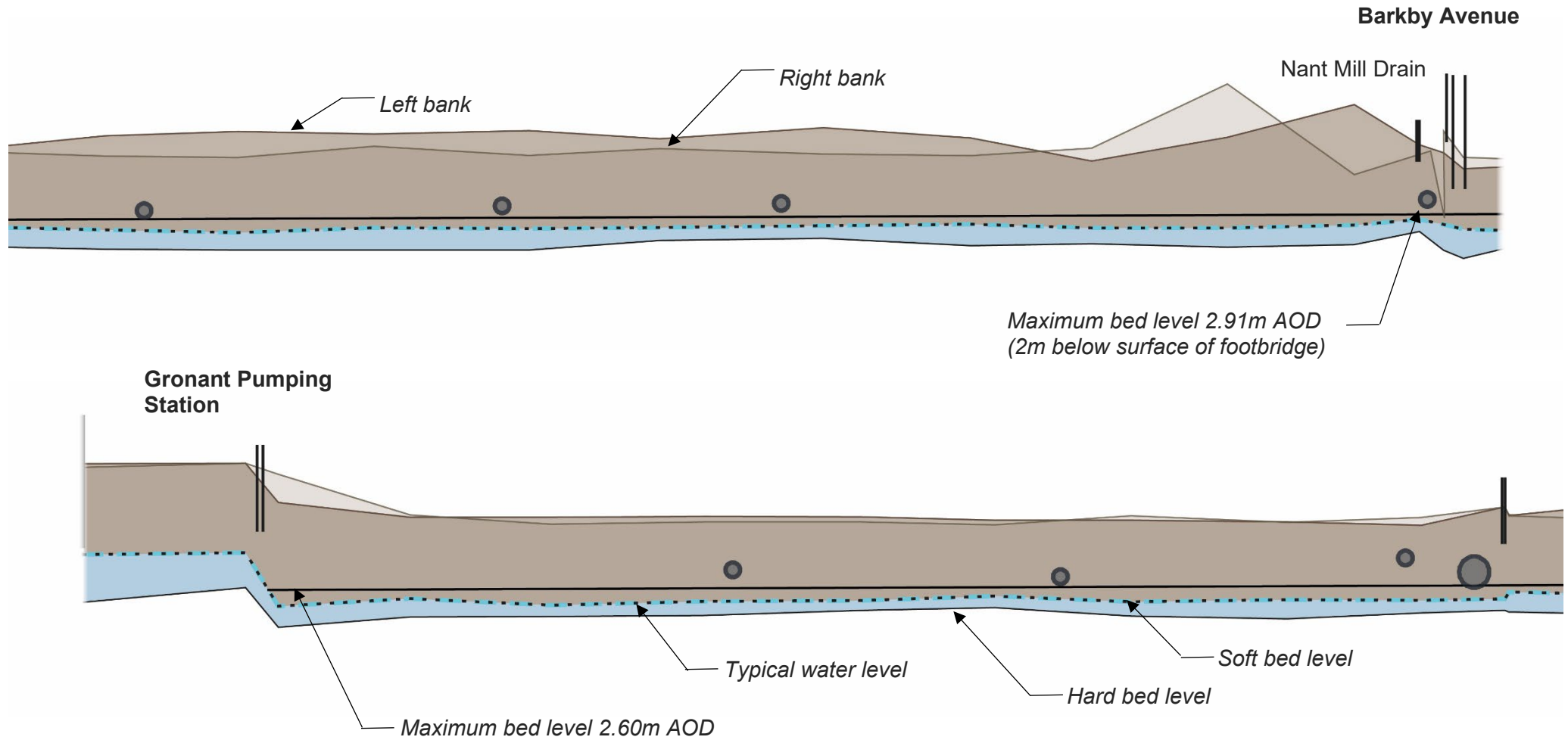
Barkby Avenue to Gronant Pumping Station

Main River Flood Risk Summary	Flooding in this reach only effects the golf course. Nant Mill Drain not modelled.
Current River Condition	The river is generally in good condition along this reach and has historically been maintained to an unnecessarily high standard.
Maintenance Impacts	Maintaining the river channel in this reach has little impact on flood risk but some clearance is required for Gronant pumping station to operate effectively. Maintenance can also affect flooding in reach P6.



NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	bird nesting, water vole, lizards, Natterjack toads	partial clearance annually (Sep/Oct)
bankside tree and hedge management	bird nesting, bats, lizards, Natterjack toads	annually (Jan/Feb)
channel blockage removal	biosecurity, hazardous waste	reactively before heavy rain
Nant Mill Drain debris screen clearance	biosecurity, hazardous waste	weekly and before heavy rain
Nant Mill Stream security screen clearance	biosecurity, hazardous waste	weekly and before heavy rain
Gronant pumping station debris screen clearance	biosecurity, hazardous waste	twice weekly and before heavy rain
<u>riverbed level management</u>	fish spawning, water vole, lizards, Natterjack toads	annual monitoring

Prestatyn Gutter P7 long sections



Prestatyn Gutter P8

No plan or long section available for Prestatyn Gutter reach P8.

Gronant Pumping Station to coast

Main River Flood Risk Summary	There are no receptors affected by flooding in this reach.
Current River Condition	The river is generally in reasonable condition along this reach but there is siltation at Gronant old Sluice which will require further monitoring.
Maintenance Impacts	Maintaining the river channel in this reach has little impact on flood risk but monitoring and maintenance of silt levels at Gronant old sluice is required to ensure Gronant Pumping Station operates effectively. Preliminary modelling has shown that an 80% blockage of each pipe could lead to flood water levels rising downstream of Gronant Pumping station and coming out of bank, leading to circular pumping and slightly elevate levels in P6 and P7. 80% blockage is the equivalent of there being approximately 0.4m clearance to the soffit of each pipe (or combination) or a silt level of approximately 3.4m AOD. Consideration should be given to removing the old sluice structure and replacing it with a pedestrian bridge (to carry the coastal path), to avoid the need for ongoing maintenance; however, NRW is not the owner of the land or the structure.

NRW Maintenance Activity	Main Constraints	Frequency
channel vegetation and weed clearance	bird nesting, water vole, lizards, Natterjack toads	partial clearance annually (Sep/Oct)
bankside tree and hedge management	bird nesting, bats, lizards, Natterjack toads	annually (Jan/Feb)
channel blockage removal	biosecurity, hazardous waste	reactively before heavy rain
<u>riverbed level management</u> at Gronant old sluice	fish spawning, water vole, lizards, Natterjack toads	annual monitoring