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**Natural  
Resources**  
Wales

# St Asaph Flood Risk Management Scheme

Package B

Design and Access Statement incorporating  
Planning Statement

August 2016

Draft For Consultation

## TABLE OF CONTENTS

1.0	Introduction.....	1
1.2	Decision Making Framework .....	2
1.3	Land Ownership .....	2
2.0	Background and Need for the Scheme .....	3
3.0	Proposed Development .....	6
3.1	Location and Site Description - Overview .....	6
3.2	Left (west) bank .....	8
3.2	Right (east) bank .....	16
3.3	Downstream Sites .....	24
3.4	Construction Compounds.....	26
3.5	Construction Programme .....	27
3.6	Environmental Action Plan .....	27
4.0	The Design Component.....	27
4.1	The Design Process.....	27
4.2	Amount of Development.....	27
4.3	Layout, Scale, Appearance and Landscaping .....	28
5.0	The Access Component.....	33
5.1	Construction Access .....	33
5.2	Access to the Completed Development.....	33
6.0	Community Consultation/Involvement .....	34
7.0	Planning Policy.....	35
7.1	National Policy .....	35
7.2	Local Policy .....	36
7.3	Assessment against planning policy.....	37
8.0	Conclusion .....	44
9.0	Plans and Supporting Documents.....	45
10.0	Reference List .....	47

## 1.0 Introduction

This document is the Design and Access Statement, incorporating Planning Statement, for Natural Resources Wales' (NRW) St Asaph Flood Risk Management Scheme (FRSM).

The St Asaph FRMS is being delivered as two discrete packages of work:

1. Package A of the Scheme consists of proposals to replace the Spring Gardens Bridge. Planning consent has been received for those works from Denbighshire County Council (DCC) dated 9<sup>th</sup> August 2016 (DCC planning reference: 46/2016/0576).
2. Package B consists of proposals to improve existing and construct new flood defences along the River Elwy through St Asaph city centre and downstream.

This document supports the planning application in relation to Package B of the FRMS.

**Table 1.1: St. Asaph FRMS Package B Planning application summary**

<b>Date Application Submitted:</b> xx/xx/xxxx	<b>Planning Portal Application Number:</b> PP-xxxxxxx
<b>Community:</b> St Asaph	<b>Central Grid Reference:</b> NGR SJ035742
<b>Application Type:</b> Full	<b>Location:</b> St Asaph, between Lower Denbigh Road and Spring Gardens, and downstream mitigation sites at Dol Afon and Rhuddlan.
<b>Applicant:</b> Natural Resources Wales <b>Agent:</b> Black & Veatch Ltd.	<b>Description:</b> Package B of the St Asaph FRMS consisting of construction and operation of flood defences, including walls, ramps, embankments, outfalls and repairs to existing flood defence structures.

Section 42 of the Planning and Compulsory Purchase Act 2004 (as amended) requires that a statement covering design concepts and principles, as well as access issues, be submitted with an application for planning permission. The guidance contained in Technical Advice Note (TAN) 12 (updated 2016), The Town and Country Planning (General Development Procedure) (Amendment) (Wales) Order 2009, and the CABE publication 'Design and Access Statements; how to write, read and use them', have been drawn upon in the preparation of this statement.

This statement describes the proposals that are the subject of this planning application. It describes the relevant policy background and provides an appraisal of the proposals with planning policy. It should be read in conjunction with the following documents and drawings that accompany the planning application:

- Environmental Report
- Tree Survey Report and Tree Protection Plans

- Preliminary Ecological Assessment and Extended Phase 1 Habitat Survey Report
- Bat Survey Report
- Flood Consequence Assessment
- Ground Investigation Factual Report
- Archaeological Desk Based Assessment
- Landscape Master Plans
- Pre-Application Consultation Report
- Scheme Drawings, including Site Plan, General Arrangements, Detailed Arrangements and Sections (refer to drawing list at end of document for full details of drawings).

## 1.2 Decision Making Framework

The St Asaph FRMS is located within the administrative area of Denbighshire County Council (DCC) who will act as the local planning authority for the application.

'Flood-relief works' are described in 10 (h) Schedule 2 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 ('the EIA Regulations') and therefore an EIA Screening Opinion was required from DCC. On 13<sup>th</sup> October 2015, DCC confirmed that the proposed development is not an EIA development and therefore a full Environmental Statement was not required to accompany the planning application.<sup>1</sup>

NRW have however produced a non-statutory Environmental Report in support of this planning application. This has been prepared by NRW to transparently demonstrate the application of the principles of sustainable management of natural resources.

## 1.3 Land Ownership

Drawings 122488-BVL-Z0-PB-DR-V-00017, 122488-BVL-Z0-PB-DR-V-00018 and 122488-BVL-Z0-PB-DR-V-00019 show the proposed red line boundary of the works. NRW does not own all of the land within the application boundary. Notice has therefore been served on all known landowners and a notice has been placed in NEWSPAPER NAME on DATE. This application is therefore supported by a Certificate C.

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<sup>1</sup> The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 have been superseded by the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2016 since the screening opinion was received from DCC. The thresholds provided in Schedule 2, Part 10(h) however remain the same across both pieces of legislation and therefore the screening opinion is still considered valid.

## 2.0 Background and Need for the Scheme

The River Elwy is a tributary of the River Clwyd that runs from south to north through the city of St Asaph.

There have been a number of reported instances of flooding in St Asaph. During the 20th century, flooding was reported during 1964 and 1965. This prompted construction of the original defences through the city. These defences were raised again during 1975.

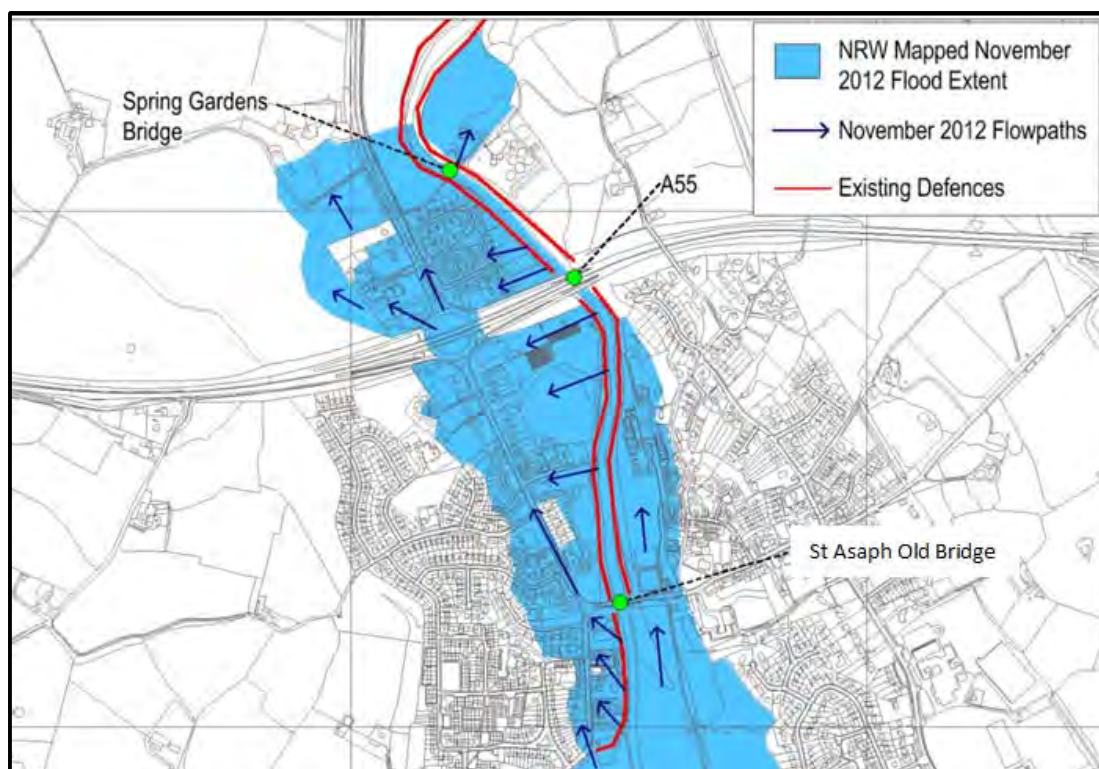
Most recently a significant flood event occurred during November 2012, when prolonged heavy rainfall caused the Elwy to rise 3m above its normal level and flood over 300 properties (residential and commercial) and 70 caravans within the city. This event is estimated to have been between a 1 in 100 and 1 in 200 annual chance event (i.e. an event with a 0.5 to 1% chance of occurring in any given year) and affected 320 properties and 70 caravans.

In extreme circumstances, such as during November 2012, a flood event on the River Elwy can result in significant debris in the river which can reduce water conveyance. These effects are exacerbated in areas where flow may already be restricted such as at Spring Gardens Bridge, which crosses the Elwy downstream of the A55. This debris, typically woody, can increase flood risk upstream by raising water levels. Package A of the proposed Scheme aims to resolve this problem.



*Plate 2.1: November 2012 flooding in St Asaph*





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**Figure 2.1:** November 2012 Flood Extent in St Asaph illustrating primary flowpaths

Hydraulic modelling undertaken as part of this project appraisal confirms that at present, the existing defences in St Asaph provide protection against a flood with a 1 in 50 (2%) annual chance of occurring in any given year.

The existing defences in St Asaph are generally in a reasonable condition however some sections, notably a section from Lower Denbigh Road to St Asaph Old Bridge are in a relatively poor condition. Private gardens have encroached over parts of the defence, limiting access to maintain it. To date, NRW have been primarily reliant on private landowners mowing the embankment to prevent heavy standards of vegetation establishing, which might compromise its integrity.

Since the 2012 flooding, NRW has completed some works to address high flood risk areas throughout the city, including repairs to sections of embankment around Roe Park which had settled, removal of debris along the river banks, and the implementation of demountable defences ('Floodstops') as an emergency measure adjacent to Spring Gardens Bridge. The use of demountable defences is however not considered to be a sustainable long term solution to flood risk management within the city, as the requirements placed on NRW Operations staff are likely to increase in the future as a result of climate change.

The St Asaph FRMS is being developed by NRW to reduce the risk of flooding in St Asaph to a present day 1 in 200 (0.5%) annual chance. To achieve this, existing defences are to be raised and improved, and new defence built. Spring Gardens Bridge will also be replaced as part of the Scheme, in advance of other works commencing to help improve conveyance.

Climate change is predicted to increase the frequency with which severe floods occur in St Asaph. Future climate change will both significantly reduce the standard of protection provided by the existing defences and increase the number of properties at risk from flooding. If the defences remain at their present height, by 2070, the consequences for St Asaph would be:

- The city's defences would only provide around a 6.7% (1 in 15) annual chance standard; and
- Some 520 residential and 180 commercial properties would be at risk in the 0.5% (1 in 200) annual chance flood.

Therefore the St Asaph FRMS has been developed to reduce both present day risk of flooding and allow the defences to be managed to cope with the effects of future climate change and maintain at least a 1 in 100 (1%) standard of protection.

As described in Section 1.0, whilst a single Scheme, the St Asaph FRMS is being delivered as two discrete packages of work:

- Package A consists of works to replace Spring Gardens Bridge, which is located immediately downstream of St Asaph and impedes flow.
- Package B which consists of work to provide new, and improve existing, flood defences throughout St Asaph to protect it from flooding from the Afon Elwy.

## 3.0 Proposed Development

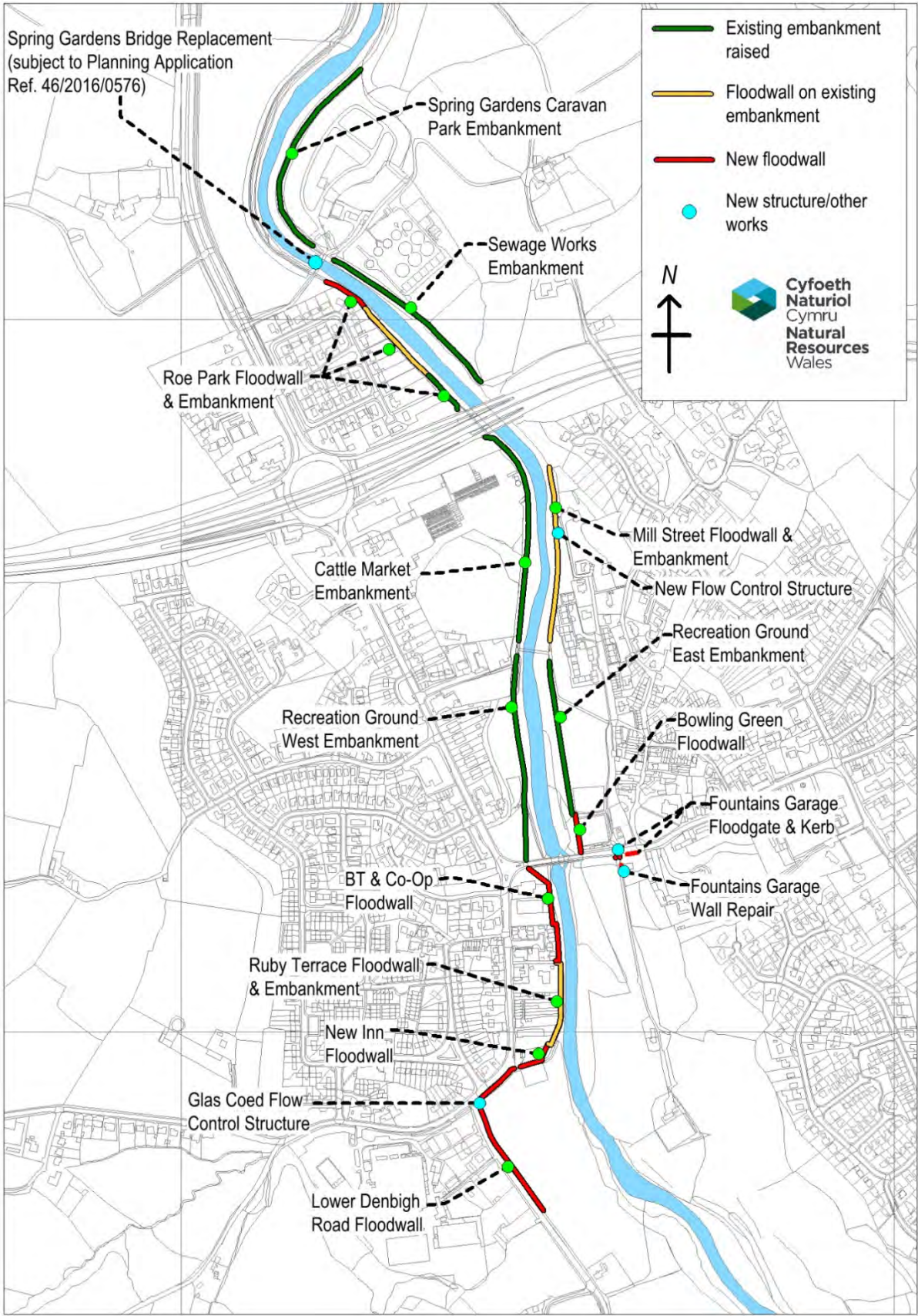
Package B, hereafter referred to as ‘the proposed development’, involves the construction of new and improved defences throughout St Asaph including raising of embankments, construction of walls and setting back of defences. The following section provides further context and descriptions of the proposed development.

### 3.1 Location and Site Description - Overview

St Asaph is a small city located on the banks of the River Elwy in Denbighshire, North Wales. The proposed development runs from the upstream extent (to the south of the city) at Lower Denbigh Road (NGR SJ03507379) to the downstream extent (to the north of the city) near Spring Gardens (NGR SJ02247534). Works are also proposed at two discrete locations downstream of the city, namely Dol Afon (from NGR SJ03247593 to SJ03207608) and Station Road, Rhuddlan (between SJ 02107784 and SJ02157793). The proposed development has been divided into a number of sub-sections as shown in Figure 3.1 and described in the following sections.

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**Figure 3.1:** Scheme Extent and Sections (not including downstream extents)

## 3.2 Left (west) bank

### Lower Denbigh Road

Lower Denbigh Road forms part of the B5381. The west and north sides of the road in this section primarily consist of residential properties with a lesser number of commercial properties. The proposed development in this area is adjacent to the east and south sides of the road. A single arable field is present between the road and River Elwy. A small, watercourse, known as Glascoed Stream, runs along the northern boundary of the field and continues adjacent to Glascoed Road.



**Plate 3.1:** Lower Denbigh Road, facing south. Proposed flood wall will be constructed along the line of hedgerow to the left of the photo

The proposed development consists of the construction of approximately 260m, 1m high reinforced flood wall. This will tie in to the New Inn building to the north and high ground to the south. It is proposed that the wall be clad on both sides in natural stone chosen to match the existing headwall on Glascoed Stream. A stone coping will also be provided on top of the wall.

Works will require the removal of an existing hedgerow to enable construction, and the existing access gate into the field will be relocated to beyond the southern extend of the proposed wall. The hedgerow will be reinstated on a new alignment upon completion of the works, subject to landowner agreement.

Where the proposed flood wall crosses the Glascoed Stream, a new flow control structure will be constructed. This will consist of a 'Coplastix' flap valve secured to the new headwall with chemical anchors. The new flap valve has been designed to ensure that the existing pipe opening capacity is maintained.

The following drawings, submitted in support of the planning application, provide additional detail on the Lower Denbigh Road works:



- 122488-BVL-Z0-PB-DR-C-23101: Reach One General Arrangement Sheet 1 of 2
- 122488-BVL-Z0-PB-DR-C-23110: Reach One Left Bank Sections Sheet 1 of 4

### New Inn

The New Inn public house is located on Lower Denbigh Road, close to the corner as it turns towards St Asaph city centre. The pub has a beer garden to its rear consisting of garden furniture and children's play facilities (see Plate 3.2). The beer garden is bounded by a masonry wall approximately 1.8m in height (as viewed from the garden)/ 2m high (as viewed from the riverward side).



**Plate 3.2:** New Inn Beer Garden from rear car park. Existing masonry wall can be seen on far side of the garden

It is proposed that internal property flood resilience measures are installed within the integral garage at the New Inn; this will include structural reinforcements.

The existing masonry wall adjoining New Inn will be lowered to ground level and replaced with a reinforced concrete flood wall approximately 50m in length and up to 1.4m in height. As the wall turns towards the north to run adjacent to the river, it will rise to a height of up to 1.8m in height and be clad in stone. An existing 1.3m high embankment on the riverward side of the wall will be reprofiled to follow a nominal fall from the wall towards the river.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed New Inn works:

- 122488-BVL-Z0-PB-DR-C-23101: Reach One General Arrangement Sheet 1 of 2
- 122488-BVL-Z0-PB-DR-C-23110: Reach One Left Bank Sections Sheet 1 of 4
- 122488-BVL-Z0-PB-DR-C-23121: New Inn Detailed Arrangement

## Ruby Terrace

The Ruby Terrace section of the St Asaph FRMS runs between the New Inn to the south and the Co-Op to the north.

Ruby Terrace consists primarily of residential properties and a small number of commercial properties alongside Lower Denbigh Road. The terraced houses are all backed by narrow gardens reaching as far as the existing riverside embankment (Plate 3.3). One, larger detached property and garden is located behind Foxon's Game Fishing shop and car park.

Deniel Methodist Church is located on Lower Denbigh Road. To the north is Is Terfyn cul-de-sac, which consists of a small number of maisonettes backing the riverside (Plate 3.4).

The riverside itself is heavily tree lined and has a Public Right of Way (PRoW) (Footpath 208.31.2) running between the river and property boundaries. The PRoW is generally un-surfaced and poorly maintained. A number of properties currently have access steps down the embankment. The existing embankment runs through the back gardens of the adjoining properties from New Inn to Is Terfyn. Between Is Terfyn and the Co-Op, the PRoW runs along higher ground along the river bank and no formal flood defence exists in this location.

The proposed works behind Ruby Terrace consist of the construction of approximately 188m of reinforced concrete flood wall, up to 1m high, with concrete cut-offs and brick cladding, along the top of the existing embankment. The flood wall will be topped by a 0.8m high timber fence.

Between Morfa Court and Is Terfyn, a concrete access ramp with a 1:6 slope will be provided over the embankment and the wall will run parallel with the track for approximately 15m on either side.

Behind Morfa Court, the garden will be profiled at the boundary with a 1 in 2 slope adjacent to the path level.





**Plate 3.3:** Riverside footpath behind properties at Ruby Terrace



**Plate 3.4:** Riverside footpath along higher ground behind Is Tefryn



A new precast concrete headwall will be constructed on an existing outfall behind properties at Is Terfyn and fitted with a 150mm 'Coplastix' flap valve.

Any access steps present over the embankment will be retained or reinstated upon completion of the works.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed New Inn works:

- 122488-BVL-Z0-PB-DR-C-23102: Reach One General Arrangement Sheet 2 of 2
- 122488-BVL-Z0-PB-DR-C-23111: Reach One Left Bank Sections Sheet 2 of 4
- 122488-BVL-Z0-PB-DR-C-23112: Reach One Left Bank Sections Sheet 3 of 4
- 122488-BVL-Z0-PB-DR-C-23124: Reach One Morfa Court / Is Terfyn Access Ramp.

## Co-Op and BT

The Co-Operative is a small supermarket and associated car park on Lower Denbigh Road. The BT Telephone Exchange is located to the north of the Co-Op and is within St Asaph Conservation Area. An existing stone masonry wall, up to 3m in height (as viewed from the riverward side), runs along the boundary of the Co-Op and BT and ties into St Asaph Old Bridge (Scheduled Monument and Grade II Listed) acts as an informal flood defence. The ground behind the masonry wall is raised resulting in the perceived height of the wall from the landward side being approximately 1.8m. The PRow continues to run along the river bank adjacent to the existing wall.

The proposed works in this location will involve the removal of the existing masonry wall. This will be replaced by a 50m length of reinforced concrete flood wall up to 2.4m in height with stone cladding on bored piles and a 50m section of 1.1m high stone wall with flood cladding.

Where the flood wall ties in with St Asaph Old Bridge, this will be set back to improve views and access to the bridge, thereby improving the value of the Conservation Area, Scheduled Monument and Listed Building. This will require the lowering of approximately 300m<sup>2</sup> of land behind the BT Telephone exchange by a maximum of 1.5m, profiled to provide a minimum of 1 in 40 fall from the flood wall to the river. The existing footpath will be reprofiled and tarmac surfaced.



**Plate 3.5:** Riverside footpath behind the BT Telephone Exchange

St Asaph Old Bridge will receive scour protection beneath its outer arches.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Co-op and BT works:

- 122488-BVL-ZO-PB-DR-C-23102: Reach One General Arrangement Sheet 2 of 2
- 122488-BVL-ZO-PB-DR-C-23113: Reach One Left Bank Sections Sheet 4 of 4
- 122488-BVL-ZO-PB-DR-C-23126: Reach One BT Telephone Exchange Detailed Arrangement
- 122488-BVL-ZO-PB-DR-C-23127: Reach One BT Telephone Exchange Sections

### **Recreation Ground West and Cattle Market Embankment**

To the north of St Asaph Bridge is St Asaph Recreation Ground which consists of an existing flood embankment topped with a footpath. The surrounding green space consists of picnic, timber playground and 'Trim Trail' facilities and scattered trees, with denser tree cover along the river bank itself. An access road runs to a small car



park behind Pen Y Bont surgery and adjacent properties. The Plough Inn car park extends close to the river, just south of St Asaph library and St Asaph Cricket Club and ground. Close to the library Pont Begard footbridge extends over the river and also forms part of National Cycle Route 84 which runs between Rhyl and St Asaph (Plate 3.6); the cycle path runs adjacent to the river on the left bank along the same alignment as the footpath. A cattle market is present to the north of the cricket ground before the A55 crossing (Plate 3.7).



**Plate 3.6:** Existing embankment and footpath facing south towards Pont Begard footbridge



**Plate 3.7:** Existing embankment and footpath facing north towards cattle market

The proposed works in this location involve approximately 600m of the existing embankment being raised by a maximum of 0.6m in height and re-profiled. No raising is proposed close to the footbridge as the crest level at this location already exceeds the necessary flood defence level.

A 20m length of sheet pile wall up to 2.4m in height will be provided in the cattle market to prevent the need for existing slurry tanks within the market to be relocated. The cattle market is well used and there is insufficient space within the site for the tanks to be relocated.

Any fencing that is currently present along the landward toe of the embankment will be reinstated upon completion of the works to the agreement of the landowner. This includes sections of timber fencing and stock-proof fencing adjacent to the cattle market.

The tarmac path along the crest of the embankment will be widened to 2.4m wide.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed recreation ground and cattle market works:

- 122488-BVL-Z0-PB-DR-C-24101: Reach Two General Arrangement Sheet 1 of 3
- 122488-BVL-Z0-PB-DR-C-24102: Reach Two General Arrangement Sheet 2 of 3
- 122488-BVL-Z0-PB-DR-C-24103: Reach Two General Arrangement Sheet 3 of 3
- 122488-BVL-Z0-PB-DR-C-24110: Reach Two Left Bank Sections Sheet 1 of 2
- 122488-BVL-Z0-PB-DR-C-24111: Reach 2 Left Bank Sections Sheet 2 of 2

## Roe Park

Roe Park is a small housing estate to the north of the A55 which backs on to the existing River Elwy embankment (Plate 3.8). Property boundary walls and fences generally run along the landward toe of the embankment; however, as the embankment approaches Spring Gardens Bridge, boundary walls are situated on the crest of the embankment and form part of the formal flood defence.

National Cycle Network Route 84 comes from the south and diverts away from the river, through the Roe Park estate before running adjacent to the A525 (The Roe). A PRow (Footpath 208.21.2) runs along the crest of the embankment behind Roe Park.





**Plate 3.8:** Existing embankment and footpath adjacent to Roe Park properties

The proposed works necessitate the lowering of the existing embankment by a maximum of 1m for a length of approximately 140m, before transitioning to the height of the existing embankment at the northern extent of the reach. The existing 1.5m high floodwall which forms property garden boundaries to the north of the reach will be removed. The embankment will be topped with a reinforced concrete flood wall, approximately 200m in length and up to 1.8m in height, with brick cladding and sheet piled foundations..

On the riverward side of the wall, a 2.4m wide tarmac footpath/cycleway will be provided. On the landward side of the wall, a 1.5m concrete path will be provided for maintenance and inspection purposes.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Roe Park works:

- 122488-BVL-Z0-PB-DR-C-25101: Reach Three General Arrangement Sheet 1 of 3
- 122488-BVL-Z0-PB-DR-C-25110: Reach Three Left Bank Sections

## 3.2 Right (east) bank

### Fountains Garage

Fountains Garage is located on the right bank of the River Elwy, to the south of St Asaph Old Bridge and the High Street. To its west is an area of public open space adjacent to the river which contains picnic facilities and a PRow (Footpath 208.10.2). The railings and boundary wall associated with St Kentigern and St Asaph Parish



Church, which are Grade II listed, are located along the boundary of this space. An existing stone masonry wall is present either side of the ramped access track where it enters the public open space from the road (Plate 3.9).



**Plate 3.9:** Existing ramp and walls adjacent to Fountain's Garage

The proposed works consist of the addition of a 0.5m high flood gate across the entrance of the access track between Fountains Garage and an existing stone bus shelter on High Street. An approximately 20m section of raised kerb up to flood defence level will also be constructed alongside the edge of the High Street outside Fountains Garage and reinforced concrete access ramp provided into the garage. The existing boundary wall around the garage which acts as an informal flood defence and has partially collapsed, will be repaired.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Fountains Garage works:

- 122488-BVL-Z0-PB-DR-C-24101: Reach Two General Arrangement Sheet 1 of 3
- 122488-BVL-X0-PB-DR-C-23130: Reach One Fountains Garage Detailed Arrangement
- 122488-BVL-Z0-PB-DR-C-23131: Reach One Fountains Garage Sections

## Bowling Green

A bowling green is present to the north of St Asaph Old Bridge on the right bank and is bounded by a hedge separating it from the remainder of St Asaph Common (Plate 3.10). Between the river and bowling green is a strip of public open space containing



the start of National Cycle Network Route 84 and a number of trees which line the river corridor. The area falls within both St Asaph Common and St Asaph Conservation Area, with flood defences which tie-in to St Asaph Old Bridge (Grade II Listed and Scheduled Monument). The existing defences at this location consist of a grassed embankment with approximately 20m of stone pitching adjacent to the bridge (Plate 3.10).



**Plate 3.10:** Boundary hedge of bowling green (left of photo) at St Asaph Old Bridge



**Plate 3.11:** Stone pitching to be removed and reinstated



The proposed works at this location include the lowering of the existing embankment and relocation of stone pitching to help enhance the visual setting of the St Asaph Old Bridge. At the landward toe of the embankment, along the bowling green boundary, the existing hedge will be removed and a 55m long reinforced concrete floodwall will be built. The wall will be stone clad with a natural stone coping to be in-keeping with the adjacent St Asaph Old Bridge. The area between the embankment crest and new flood wall will then be filled with material previously removed from the existing embankment crest. Stone pitching and the existing cycle path will be reinstated to highways specification. An access ramp with a 1 in 12 gradient will be provided over the embankment to the north of the bowling green.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Bowling Green works:

- 122488-BVL-Z0-PB-DR-C-24101: Reach Two General Arrangement Sheet 1 of 3
- 122488-BVL-Z0-PB-DR-C-24115: Reach Two Right Bank Sections Sheet 1 of 2

### Recreation Ground East

The recreation ground to the north of the bowling green is an area of public open space containing recreation facilities including picnic benches, a skate park and play area (Plate 3.12). It is known locally as St Asaph Common and is designated as Common Ground under the Commons Act (2006). It also lies within St Asaph Conservation Area. The existing defence currently consists of a grassed flood embankment topped with the tarmac footpath and cycle path.



**Plate 3.12:** *Play facilities and skate park within St. Asaph Common*

Extending north from the bowling green a 220m section of embankment will be raised by a maximum of 0.5m. The embankment crest will be widened to 3m and will

be finished with a 2.4m wide tarmac path. It is proposed that the embankment slopes will vary between 1 in 2 and 1 in 5 in this area in order to soften the appearance of the slopes and enable informal pedestrian access up and over the embankment to the river side.

Access ramps between the bank and the bowling club will be retained and raised to suit the re-profiled embankment; with access ramps to a maximum gradient of 1 in 9.5.

The embankment raising terminates just upstream (south) of the Pont Begard footbridge. New access ramps and steps will be constructed, where appropriate, to replace any existing facilities.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Recreation Ground East works:

- 122488-BVL-Z0-PB-DR-C-24101: Reach Two General Arrangement Sheet 1 of 3
- 122488-BVL-Z0-PB-DR-C-24102: Reach Two General Arrangement Sheet 2 of 3
- 122488-BVL-Z0-PB-DR-C-24115: Reach Two Right Bank Sections Sheet 1 of 2

### Mill Street

The Mill Street section of works is located between Port Begard Bridge and the A55 road crossing. The southern end of this section consists of residential properties, before reaching the Mount, a densely wooded area consisting of a group of Tree Preservation Order trees located on higher ground beyond the Scheme footprint. The existing defences along this section consist of a grassed embankment with numerous trees along the riverward side and a narrow permissive footpath running along the embankment crest (Plate 3.13).



**Plate 3.13:** Embankment behind properties at Mill Street, facing north

Approximately 230m of the existing flood crest at Mill Street will be lowered by up to 0.3m. A reinforced concrete floodwall with natural stone cladding and coping will then be built to a maximum 1m height, along the lowered embankment crest. The permissive footpath along the embankment crest will run alongside the low floodwall and will be widened and improved as part of the proposal.

To improve surface water drainage on the landward side of the embankment, a new outfall will be constructed, with the inlet to the outlet at an existing low point adjacent to Mill Street. Both the inlet and outfall will comprise a precast concrete headwall equipped with flap valve (outfall) and penstock (inlet).

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Mill Street works:

- 122488-BVL-Z0-PB-DR-C-24102: Reach Two General Arrangement Sheet 2 of 3
- 122488-BVL-Z0-PB-DR-C-24103: Reach Two General Arrangement Sheet 3 of 3
- 122488-BVL-Z0-PB-DR-C-24116: Reach 2 Right Bank Sections Sheet 2 of 2

### Sewage Works

The existing defence alignment alongside the western side of Dwr Cymru Welsh Water's St Asaph Sewage Treatment Works consists of an embankment approximately 275m in length, between the A55 and Spring Gardens Bridge (Plate 3.14). It is topped by a PRow running along the crest of the embankment (Footpath 208.4.1).





**Plate 3.14:** Existing embankment behind Dwr Cymru Welsh Water Sewage Treatment Works

At this location it is proposed that the flood defence embankment will be raised by up to 0.6m and re-profiled to attain a 3.8m wide crest and side slopes with a gradient between 1 in 2 and 1 in 3. At 3.8m wide, the embankment crest has been designed to be wider than necessary such that future raising works could be accommodated without having to alter the landward profile.

Existing conifers on the landward boundary of the sewage treatment works will be removed to enable the embankment raising works to be carried out. The tree line currently serves as visual and odour screen but prevents grass growth from establishing on the embankment slopes. The screen will be replaced in part, within the sewage treatment works.

Existing access ramps upstream of the sewage treatment works will be retained, with reprofiling undertaken to reflect raised embankment crest and slope profile.

The following drawings, submitted in support of the planning application, provide additional detail on the works proposed within the Sewage Treatment Works:

- 122488-BVL-Z0-PB-DR-C-25101: Reach Three General Arrangement Sheet 1 of 3
- 122488-BVL-Z0-PB-DR-C-25115: Reach Three Right Bank Sections Sheet 1 of 2

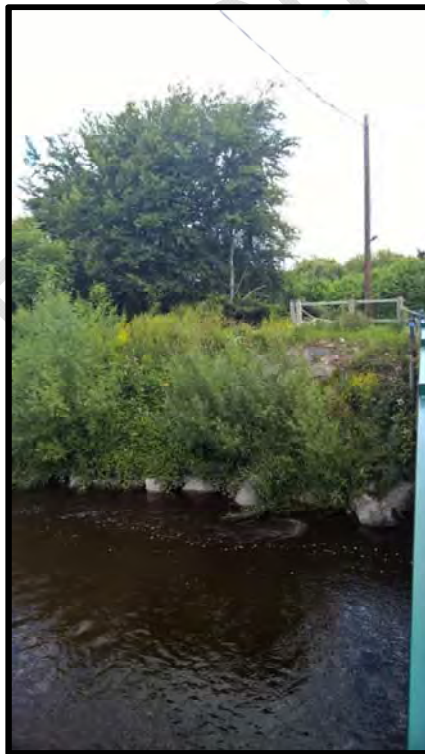
## Spring Gardens Caravan Park

Alongside Spring Gardens Caravan Park, the tree lined corridor and embankment are topped by a PRoW (Footpath 201.4.2) (Plate 3.15).

The embankment will be raised by up to 0.15m and re-profiled to attain a 3m wide crest and 1:2 landward side slopes. The embankment raising works extend over a length of approximately 320m and terminate adjacent to high ground near an existing pumping station. An existing grassed ramp located downstream of Spring Gardens Bridge will be retained and extended to meet the higher embankment crest.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Spring Gardens Caravan Park works:

- 122488-BVL-Z0-PB-DR-C-25101: Reach Three General Arrangement Sheet 1 of 2
- 122488-BVL-Z0-PB-DR-C-25102: Reach Three General Arrangement Sheet 2 of 2
- 122488-BVL-Z0-PB-DR-C-25116: Reach Three Right Bank Sections Sheet 3 of 3.



**Plate 3.15:** Embankment at Spring Gardens Caravan Park as viewed from Spring Gardens Bridge

## Spring Gardens Bridge – NOT SUBJECT TO THIS APPLICATION

Planning consent was received from DCC on 9th August 2016 (planning reference: 46/2016/0576) for the replacement of Spring Gardens Bridge. These works form Package A of the St Asaph FRMS. This application relates solely to Package B works and therefore further detail on this section of works is not included within this application.

### 3.3 Downstream Sites

Works at two downstream sites are required to ensure no increase in flood risk to downstream communities from the works undertaken through St Asaph. In summary, these works include raising of an existing embankment adjacent to Dol Afon footbridge and a new low level embankment alongside Station Road in Rhuddlan.

#### Dol Afon

The proposed development at Dol Afon consists of raising the existing embankment by up to 0.5m for a length of approximately 110m. A concrete slab and pre-cast blocks will then be placed on the crest of the embankment to an additional height of up to 0.75m. Steps with hand railings will be provided over the pre-cast blocks to ensure the footbridge can remain accessible.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Dol Afon works:

- 122488-BVL-Z0-PB-DR-C-26101: Reach 4 Detailed Arrangement
- 122488-BVL-Z0-PB-DR-C-26110: Reach 4 Sections





*Plate 3.16: Existing embankment near Dol Afon footbridge*

## Rhuddlan

A new flood defence embankment will be constructed within Rhuddlan Conservation Area; this will be approximately 0.5m high over a length of approximately 60m along the verge of Station Road, using imported fill material (Plate 3.17). The embankment will be grassed and finished with 1 in 2 side slopes. This will tie in to high ground on either side. Ground levels will also be adjusted locally to tie-in with a raised kerb on Station Road.

The following drawings, submitted in support of the planning application, provide additional detail on the proposed Rhuddlan works:

- 122488-BVL-Z0-PB-DR-C-26111: Reach 4 Rhuddlan Detailed Arrangement
- 122488-BVL-Z0-PB-DR-C-26115: Reach 4 Rhuddlan Sections



**Plate 3.17:** Station Road, Rhuddlan

### 3.4 Construction Compounds

The main construction compound, known as the North Compound, will be located within the southern portion of the field to the west of Spring Gardens Bridge (see drawing 122488-BVL-Z0-PB-DR-V-00020). This will be established as part of the Package A works and will be used for the entire duration of the St Asaph FRMS construction. This compound will contain the main site office, welfare facilities and will be used for the storage of materials and plant. The main compound will be a total size of approximately 60 x 40m.

Smaller satellite compounds will also be located at various locations around St Asaph, including:

- within the existing land boundary of the BT Exchange;
- within the informal car park located behind St Asaph library;
- within St Asaph Common East, to the north of the Bowling Green; and
- within St Asaph Common West to the north of St Asaph Old Bridge.

The satellite compounds will generally be no larger than 20 x 20m in size and consist of welfare facilities and some materials and plant storage. The requirement for these compounds will result in the temporary loss of all public car parking spaces behind St. Asaph library and a portion of car parking spaces within the bowling green car park.

The proposed locations of the site compounds are shown on drawing 122488-BVL-Z0-PB-DR-V-00020 in support of this planning application.



### 3.5 Construction Programme

Subject to planning permission and all relevant consents, the construction of Package B of the St Asaph FRMS is programmed to commence in January 2017 and is anticipated to continue until June 2017.

The proposed normal construction working hours will be 7am to 7pm, Monday to Friday. Out of hours works, if required, will be agreed in advance with the Local Authority Environmental Health Officer.

### 3.6 Environmental Action Plan

The Environmental Action Plan (EAP) that accompanies this application summarises the measures that will be implemented to manage the environmental effects before, during, and after construction. The appointed Environmental Clerk of Works (ECW) will monitor compliance with the EAP.

## 4.0 The Design Component

The design component of this Design and Access Statement outlines the process that has been undertaken in the context of the physical, social and economic environment of the St Asaph FRMS and surroundings. This includes descriptions of the amount and density of development proposed, the layout, the scale of the development and the appearance of landscaping.

### 4.1 The Design Process

The design rationale for the St Asaph FRMS has been informed and constrained by:

- The frequency and scale of potential flood events.
- The layout of existing flood defences that need to be improved.
- The importance of providing robust, tried and tested solutions that can be safely and easily maintained.
- The need to ensure public safety and to provide a safe and secure working environment.
- The existing topographic, ground conditions and the surrounding landscape and above-ground features.
- Feedback from stakeholder engagement.
- The need to maintain areas of historic and cultural interest.
- The aim to create better places for people and wildlife.

### 4.2 Amount of Development

The total area of the proposed Scheme, including temporary working areas, is approximately 7.1 hectares. The footprint, location and amount of development are dictated by the function the proposed defences need to perform to protect the area to a 1 in 200 year level of flood protection present day (0.5% chance of overtopping in any one year); the need to carry out regular routine maintenance; and the requirements of health and safety legislation. They have also been designed so that,

if needed, they can be raised again in future to manage the effects of climate change.

The proposed Scheme is therefore considered to be appropriate in size and respect of its functional requirements.

### **4.3 Layout, Scale, Appearance and Landscaping**

The FRMS is designed to sensitively integrate with the surrounding landscape as far as is reasonably practicable. The layout, scale, appearance and landscape of the individual components are described in Table 4.1.

Generally, the layout of the existing defences and the presence of surrounding properties and community facilities places limitations on the layout of the proposed development. The scale of the development is necessary to ensure an adequate flood defence level is achieved.

Wherever possible, material generated during construction works will be re-used elsewhere on site to avoid the need for it to be taken off-site and to minimise the import of material. The appearance of the defences has been designed to match the existing features, including the grassing of embankments and using stone or brick cladding on flood walls to remain in keeping with adjacent features, particularly within the Conservation Areas and near to the Listed Buildings and Scheduled Monument. Cladding will be chosen in consultation with relevant stakeholders

.

**Table 4.1: Layout, Scale, Appearance & Landscaping for each section of the St Asaph FRMS**

Reach	Summary of proposed works	Appearance & Landscaping (refer to Landscape Master Plan for further detail)
<b>Lower Denbigh Road</b>	<p>Flood wall approximately 260m in length varying in height between approximately 0.8-1m depending on location.</p> <p>New outfall to be located on Glascoed Stream.</p>	<p>The existing hedgerow will be removed and replaced alongside the new flood wall, subject to landowner agreement. 5 trees will also require removal, with replacement tree planting along Glascoed stream, subject to landowner approval.</p> <p>The existing access gate into the field will be relocated to the south of the proposed flood wall.</p> <p>Flood wall will be clad in stone and topped with a 0.1m thick stone coping.</p> <p>The head wall of the outfall will be clad in stone to match existing.</p>
<b>New Inn</b>	<p>Structural reinforcements will be made to approximately 10m of the New Inn Garage.</p> <p>Flood wall approximately 50m in length around beer garden, a maximum of 1.4m in height along the southern boundary and 1.8 in height along the eastern boundary.</p> <p>The existing embankment to the east of the beer garden will be reprofiled to create a nominal fall between the proposed wall and the river.</p>	<p>Flood wall will be clad in stone and topped with a 0.1m thick natural stone coping to improve the visual appearance of the wall.</p> <p>There will be no change to the external appearance of the New Inn Garage.</p>



<b>Ruby Terrace</b>	<p>Flood wall approximately 185m in length and 1.1m high.</p>	<p>The wall will be clad in brick and topped with a brick coping. A timber fence, up to 1.1m in height, will be fixed to the top of the wall where required to reinstate a 1.8m high boundary. Existing boundary fences will be reinstated in agreement with landowners.</p> <p>The garden behind Morfa Court will be re-profiled at its boundary with a 1:2 slope adjacent to path level. In other locations, the ground surface will be cut and reinstated with seeded topsoil to achieve a nominal fall in the riverward direction.</p> <p>The footpath will be surfaced with gravel and be between 1.2-2m wide. Access steps to the river bank from properties will be reinstated upon completion of the works.</p>
<b>Co-Op/BT Exchange</b>	<p>Flood wall approximately 100m in length. This including:</p> <ul style="list-style-type: none"> <li>- Approximately 50m of 1.2m high flood wall behind the Co-Op.</li> <li>- Approximately 50m of flood wall up to 2.4m in height on the riverward side adjacent to the BT Exchange. Due to a difference in ground levels this will result in a perceived height of approximately 1.1m from the landward side.</li> </ul>	<p>Flood wall to be set back and ground lowered to improve the visual interpretation of St Asaph Old Bridge, which is both a Scheduled Monument and Listed building, by bringing a currently obstructed arch in to view.</p> <p>The new flood wall will be clad with natural stone to be in keeping with the setting of St Asaph Old Bridge and Conservation Area. The wall will be topped with a natural stone coping.</p> <p>The ground on the riverward side of the set-back portion of wall will be lowered and re-profiled to provide a minimum 1 in 40 fall between the flood wall and the river, and seeded with wildflowers.</p> <p>The footpath will be resurfaced with tarmac as an improvement to the existing un-surfaced path. The setting back of the floodwall in this location will improve access under the westernmost arch of the bridge.</p>

<p><b>Recreation Ground West and Cattle Market</b></p>	<p>Raising of approximately 600m of embankment by a maximum height of 0.6m.</p>	<p>The embankment will be reinstated with seeded topsoil.</p> <p>The footpath along the crest of the embankment will be reinstated with a wider 2.4m tarmac path with precast concrete edgings. The access ramp between the library and Pont Begard bridge will be reinstated with tarmac at a 1:12 gradient.</p> <p>The existing concrete access steps over the embankment will be removed as they are not considered to be necessary with the access ramp.</p> <p>Within the St Asaph Common and recreation ground the embankment side slopes will be slackened in order to improve its appearance and enable informal pedestrian access to the river up and over the embankment.</p> <p>The timber play equipment present within the recreation ground will be replaced in situ upon completion of the works.</p> <p>Along the landward toe of the embankment, replacement rail, chain link, timber and stock-proof fencing will be provided if needed.</p> <p>A sheet pile wall up to 2.4m in height will be constructed in the cattle market to allow two tanks and a shed to remain in their current position. A new 5-bar metal farm gate will also be installed to the south of the existing tank location to allow access for NRW Operations team for maintenance purposes.</p>
<p><b>Roe Park</b></p>	<p>Approximately 140m of embankment to be lowered by up to 1m to enable a 3m wide crest to be provided before transitioning to the height of the existing embankment.</p> <p>New flood wall approximately 200m in length and between 1.4-2m in height on alignment of existing flood wall.</p> <p>Section of embankment between the wall and the existing fenceline lowered by approximately 300mm to provide a 1.5m wide level surface which will be used to provide maintenance access on the landward side of the wall.</p>	<p>The proposed flood wall will be clad in brick. The embankment will be reinstated with seeded topsoil.</p> <p>Existing property boundary fences will be reinstated upon completion of the works.</p> <p>The footpath along the crest of the embankment, which is currently gravel surfaced, will be reinstated with a tarmac surface. The maintenance path on the landward side of the wall will be concrete. A lockable access gate will be provided at the upstream end of the wall, to be accessed via new steps down the embankment, such that this corridor can only be accessed by NRW Operations.</p> <p>Two timber bollards will be installed on the crest of the embankment, close to where the existing cycle path currently diverts through Roe Park to prevent vehicles from using the embankment.</p>

<b>Fountains Garage</b>	Installation of 0.5m high flood gate and re-profiling of access track.	The re-profiled ramp will be surfaced in tarmac. The flood gate will be metal and painted black.
<b>Bowling Green</b>	Lowering of embankment by approximately 0.4m. Flood wall approximately 55m in length with perceived height of 1.1m from the riverward side and 2m from the landward side.	The embankment and reinstated stone pitching will be slightly further set back than the existing to help enhance the visual interpretation of St Asaph Old Bridge. The proposed flood wall will be clad in stone with a natural stone coping to be in keeping with the bridge and Conservation Area. On the riverward side of the wall, the fill material removed from the lowered section of the embankment will be used to fill a low section of ground adjacent to the proposed wall. This fill will be compacted in line with specifications for highway works. Boundary hedge along western boundary of the bowling green will require removal for the construction of the floodwall. This will be replaced by installation of a planter containing shrubs along the bowling green side of the floodwall.
<b>Recreation Ground East</b>	Approximately 470m of embankment to be raised by a maximum of 0.5m. The crest of the embankment will be 3m wide topped with a 2.4m wide footpath.	The embankment will have between 1 in 2 and 1 in 5 side slopes and be topped with 100mm seeded topsoil. The footpath along the embankment crest will be tarmac with precast concrete edgings. An access ramp will be provided from the crest to the riverward side of the embankment.
<b>Mill Street</b>	Approximately 220m of embankment will be lowered by a maximum of 0.3m to maintain a 3m wide crest. Flood wall 230m in length and up to 1m in height. Construction of a headwall.	Flood wall will be clad in stone and have a natural stone coping. Footpath along the crest will be 2m wide Type 1 path binded with fines as an enhancement compared to the currently narrow and poorly surfaced path. The proposed outfall headwall, which is not considered visually sensitive, will be constructed of pre-cast concrete.
<b>Sewage Works</b>	Approximately 775m of embankment raised by a maximum of up to 0.6m and re-profiled to attain a 3.8m wide crest with between 1 in 2 and 1 in 3 side slopes. A 1 in 10 access ramp up the embankment will be provided to the south of the sewage treatment works.	The access ramp to the south of the treatment works will be grassed to match the existing. Overgrown vegetation will be cleared from the toe of the embankment where currently present. The conifers along the boundary of the sewage treatment works will be removed and replaced with a species to be agreed with DCWW and provide screen on the STW. A new timber farm gate and 1.2m high post and rail fence will be reinstated at the southern end of the reach.



<b>Spring Gardens Caravan Park</b>	Embankment raising over a length of approximately 320m by up to 0.15m.	Embankment crest will be reinstated with 100mm of seeded topsoil. An existing grassed ramp which is located downstream of Spring Gardens Bridge will be retained and extended to meet the higher embankment crest. A 1m high timber fence will be reinstated on the riverward side of the embankment.
<b>Dol Afon</b>	Approximately 110m of the embankment will be raised by a maximum height of 0.5m. The concrete block/slabs will be placed and will be a maximum of 0.75m high.	Given the secluded nature of this part of the site, the concrete blocks and slabs will remain exposed. Access steps with galvanised steel handrails will be provided over the blocks to maintain access to the footbridge.
<b>Rhuddlan</b>	Embankment approximately 60m in length along the verge of Station Road. It will be approximately 0.5m in height. Ground levels will also be adjusted locally to tie-in with a raised kerb on Station Road.	The embankment will be finished with 1 in 2 side slopes, grassed and designed to tie in with high ground on either side.

## 5.0 The Access Component

The access component of this document aims to explain the vehicular and transport links to the development, and how the principles of inclusive design, including the specific needs of disabled people, have been integrated in to the Scheme.

### 5.1 Construction Access

Approximately **xxx** lorry loads are required to construct Package B of the St Asaph FRMS. This equates to an average of approximately **xx** lorry loads per day over the **xx** month construction period. The primary site compound is proposed to be located in field to the west of Spring Gardens Bridge.

A Traffic Management Plan for the proposed construction works will be prepared and implemented prior to works commencing on site. This will detail the construction vehicle access routes, timing of deliveries and contingency measures for emergency access to ensure minimal disturbance to the road network and local communities.

All construction traffic will access St Asaph from the A55 where possible. It will then generally use the A525 through the city in order to reach the construction compounds or sections of work.

Pedestrian and cycle access will be retained wherever reasonably practical during construction. Some temporary closures and diversions will be required, for example where routes run along the crest of embankments to be raised. Where this is the case, permission will be sought from the Local Authority for temporary closure and any closures and diversion routes will be clearly signed. The duration and length of all temporary footpath closures will be minimised wherever possible.

During construction there will be a temporary loss of car parking spaces within the Bowling Green, Recreation Ground West and St Asaph Library car parks. Where reasonably practicable, construction will be programmed to minimise the number of car parking areas closed at any one time. All car parks will be fully reinstated upon completion of the works and will result in no permanent changes in car park provision.

### 5.2 Access to the Completed Development

The St Asaph FRMS has been designed to be low maintenance where possible and access for planned inspections and maintenance will generally be via the existing road network and footpath network. Where necessary, such as on the landward side of the wall at Roe Park, access has been included for NRW operatives to carry out routine inspections.

When a flood event occurs it is possible that some footpaths on the riverward side of the defences may become impassable. This is the case at Ruby Terrace, Co-Op/BT Exchange, the Bowling Green and Roe Park. This is the same as the existing scenario.

At Fountains Garage, the proposed flood gate has been designed to only be used during a 1 in 200 year event (i.e. a flood with a 0.5% annual chance of occurrence in any given year). It is likely that it would be closed, as a precaution, during anything exceeding a 1 in 50 year (2% annual chance) event. In such an event, the public

open space and car park to the south, which are accessed via the flood gate, would be already flooded and thus loss of access is not considered significant.

Footpaths and ramps have been designed to have gradients between 1 in 9 and 1 in 12 throughout the scheme. Footpaths will be widened and surfacing improved where possible.

## 6.0 Community Consultation/Involvement

Two public consultation events have been held in St Asaph to inform the local community of the proposals and invite their comments upon the St Asaph FRMS.

The first of these events was held in the Oriel Hotel in St Asaph on 10<sup>th</sup> December 2014. This included a session of presentations by NRW and other collaborative parties to a group of key external stakeholders as well as a public open drop-in session during the afternoon and evening.

The second public consultation event was an open drop-in session held at the Roe Park meeting rooms in St Asaph on the 4<sup>th</sup> February 2016. This included an update on design progression since the previous event and details of the proposed Scheme.

A stakeholder engagement plan has been developed and all key stakeholders and affected landowners have been consulted individually by NRW and will be kept informed and engaged as the Scheme progresses.

In addition to the public consultation events and individual landowner discussions, the local community has been updated on the development and progress of the St Asaph FRMS via NRW's website and through regular updates from NRW to the St Asaph Flood Partnership.

The early engagement that has been undertaken to date with key stakeholders has sought to ensure that all impacts are appropriately addressed.

The St Asaph FRMS is classed as a major development by virtue of it being carried out over a site area of more than 1 hectare. Under the Planning (Wales) Act 2015 it is a requirement for applicants to carry out pre-application consultation on all major developments, prior to the submission of the planning application. This has been undertaken through the following measures:

- Draft planning application made publically available on the NRW St. Asaph FRMS webpage (<https://naturalresources.wales/about-us/our-projects/st-asaph-flood-scheme/?lang=en>), between the dates of xx/xx/xxxx and yy/yy/yyyy.
- Site notices were placed on site at xxx, yyyy, and zzzz on xx/xx/xx to notify the public of the availability of the draft application and how to make representations.
- Letters sent to all owners and occupiers of land to which the application relates, and all relevant specialist consultees in order to make them aware of the draft application and allow representations to be made.

A Pre-Application Consultation (PAC) Report has been prepared to summarise this process and has been submitted in support of the application. It includes a summary



of all issues raised in response to the statutory publicity and states how issues have been addressed.

## 7.0 Planning Policy

This section describes how the proposed development meets the needs of national and local planning policy in terms of:

- Acceptability of the proposed development
- Water and flood risk
- Historic Environment
- Biodiversity
- Landscape and Visual Amenity
- Contaminated Land
- Human Population and Amenity
- Sustainability

This statement should be read in conjunction with other documents submitted in support of this planning application, in particular the Environmental Report and Flood Consequence Assessment.

Planning decisions are made in accordance with the Development Plan, unless material considerations indicate otherwise. The following policies and plans are relevant to the St Asaph FRMS.

### 7.1 National Policy

The Welsh Government set out national planning policy in Wales. Chapters of the National Policy of relevance to the St Asaph FRMS include:

- Chapter 4 – Planning for Sustainable Development
- Chapter 5 – Conserving and Improving Natural Heritage and the Coast
- Chapter 6 – Conserving the Historic Environment
- Chapter 8 – Transport
- Chapter 13 – Minimising and Managing Environmental Risks and Pollution

Planning Policy Wales (Edition 8, January 2016) is supplemented by 21 Technical Advice Notes (TANs) which planning inspectors should consider the deciding on called-in planning applications. The TANs of potential relevance to the proposed St Asaph FRMS are:

- TAN 5 – Nature Conservation and Planning
- TAN 10 – Tree Preservation Orders
- TAN 11- Noise
- TAN 12 – Design
- TAN 15 – Development and Flood Risk
- TAN 21 - Waste

## 7.2 Local Policy

The DCC Local Development Plan 2006-2021 was formally adopted as planning policy on 4<sup>th</sup> June 2013. This forms part of a range of plans, policies and programmes which have an influence over development within Denbighshire. Policies within the Local Development Plan of relevance to the St Asaph FRMS are:

- RD 1 – Sustainable Development and Good Standard Design
- BSC 1 – Growth Strategy for Denbighshire
- BSC 11 – Recreation and Open Space
- BSC 12 – Community Facilities
- PSE 2 – Land for Employment Uses
- PSE 3 – Protection of Employment Land and Buildings
- PSE 15 – Safeguarding Minerals
- RD 1 – Sustainable Development and Good Standard Design
- VOE 1 – Key Area of Importance
- VOE 4 – Enabling Development
- VOE 5 – Conservation of Natural Resources
- VOE 6 – Water Management

In addition to the policies contained within the Local Development Plan, Supplementary Planning Guidance (SPG) notes are also available. These do not form part of the adopted plan, but have been the subject of both a formal council resolution and public consultation. The Welsh Assembly Government has confirmed that following public consultation and subsequent LPA approval, SPG notes can be treated as a material planning consideration. SPG notes of relevant to the St Asaph FRMS are:

- Archaeology (no. 15) (2003)
- Conservation Areas (March 2015)
- Landscaping (no. 2) (2003)
- Listed Buildings (March 2015)
- Nature Conservation and Species Protection (No. 18) (2003)
- Trees and Development (no. 6) (2003)
- Conservation and Enhancement of Biodiversity (draft)
- Trees and Landscaping (draft)

- Planning Obligations (draft)

### 7.3 Assessment against planning policy

Table 7.1 considers the principle of development and addresses the relevant planning and environmental issues in relation to national and local planning policy.

Draft For Consultation



**Table 7.1: Assessment of St Asaph FRMS against Planning Policy**

Issue	Relevant planning policy	Comment
Acceptability of the Principle of Development	<p><b>Planning Policy Wales:</b> Chapter 4 Chapter 5 Chapter 6 Chapter 13</p> <p><b>Technical Advice Notes:</b> TAN 12</p> <p><b>Denbighshire Local Development Plan:</b> RD 1 BSC 12 PSE 2 VOE 4 VOE 5</p>	<p>The LDP identifies flood risk as a key issue facing the county and an objective of the plan is to ensure new developments are sustainable and of good quality design whilst taking in to account flood risk. The purpose of the Scheme is to provide St Asaph with a 1 in 200 year level of flood protection (0.5% change of overtopping in any given year) with additional allowances for climate change. The Scheme has been appraised in accordance with TAN15 and has been shown to provide significant benefits to the level of flood risk in St Asaph.</p> <p>The proposed design respects the site and surroundings in terms of siting, layout, scale, form, character, materials and aspect, protects the natural and historic environment where possible and does not unacceptably affect public views.</p> <p>There are a number of existing residential and employment sites in the area that will benefit from flood protection and reduced flood risk could help promote further development.</p>
Water and Flood Risk	<p><b>Planning Policy Wales:</b> Chapter 4 Chapter 13</p> <p><b>Technical Advice Notes:</b> TAN 5 TAN 15</p> <p><b>Denbighshire Local Development Plan:</b> RD1</p>	<p>The purpose of the Scheme is to provide approximately 414 properties in St Asaph with a 1 in 200 year level of flood protection (0.5% change of overtopping in any given year) with additional allowances for climate change.</p> <p>In accordance with National Planning Policy Chapter 13 and TAN15 a Flood Consequence Assessment (FCA) has been carried out, which concludes that the flood defence works are compatible with flooding and therefore there are no consequences to the development once downstream mitigation at Rhuddlan and Dol Afon are implemented.</p> <p>In accordance with the Water Framework Directive an assessment has been undertaken for the preferred option. This concluded that the main risk to the waterbody achieving its objective is as a result of riparian vegetation loss. Riparian vegetation loss has therefore been minimised as far as possible through design and the scheme is therefore considered compliant with the WFD.</p>
Landscape and Visual	<p><b>Planning Policy Wales:</b> Chapter 4</p>	<p>The proposed development is within the St Asaph and Rhuddlan Conservation Areas, close to numerous listed buildings and a Scheduled Monument. There will also be numerous views of the</p>

<p>Amenity</p>	<p>Chapter 6 Chapter 13</p> <p><b>Technical Advice Notes:</b> TAN15 <b>Denbighshire Local Development Plan:</b> RD1 BSC 11</p>	<p>development from sensitive receptors including residential properties, St Asaph Common, PRoWs and cycle routes.</p> <p>Careful consideration has been given to the potential impacts of the FRMS on landscape character and visual amenities. Generally, despite the construction of walls and embankments, the scale of the works is not anticipated to have any significant permanent effects on visual amenity or views from individual receptors. The main potential for adverse effects is as a result of pruning and removal of trees and vegetation to facilitate construction. Tree loss has therefore been a key consideration from the start of the design process and there has been a continuous desire to minimise loss through the alignment and proposed footprint of the defences. In total, approximately 24 trees within St. Asaph Conservation Area and 58 trees outside of the Conservation Area will require removal. Replacement trees will be re-planted to compensate for those lost, in locations agreed with stakeholders and landowners.</p> <p>Positive effects are anticipated by increasing the views of the bridge’s outer arches from the recreation ground and riverside paths. Slackening of embankments within the recreation ground is also expected to give a more aesthetically pleasing appearance and enable increased access and connectivity with the river.</p>
<p>Historic Environment</p>	<p><b>Planning Policy Wales:</b> Chapter 4 Chapter 6</p> <p><b>Technical Advice Notes:</b> TAN15 <b>Denbighshire Local Development Plan:</b> RD1 VOE 1 VOE 4</p>	<p>The proposed development is within St Asaph and Rhuddlan Conservation Areas. St. Asaph is also of general historic interest in archaeological and architectural terms. Careful consideration has therefore been given to designated features (in particular the Scheduled Monument/ Grade II Listed St. Asaph Old Bridge).</p> <p>The St Asaph FRMS has been designed to be sympathetic to the historic environment, and in the case of St Asaph Old Bridge enhance its character by setting back the defences on its upstream side to open up views and access to the bridge and its outer arches. On the downstream side of St Asaph Bridge, the existing stone pitching close to the bowling green will also be set back to improve views of the bridge. The cladding of flood walls within St Asaph Conservation Area will be in-keeping with existing structures and will therefore aim to preserve and enhance the special character of the area.</p> <p>The proposed works will provide additional flood protection to a number of Listed Buildings within the city. Any trees that are lost within the Conservation Area will be replaced where appropriate to be consistent with the character and appearance of the area.</p>

		<p>Extensive consultation has been undertaken with Cadw, CPAT and DCC with regard to the proposed Scheme and an archaeological Desk-Based Assessment has been undertaken and submitted in support of the planning application; this concludes that despite St Asaph being an area of historic significance, the archaeological potential of the proposed working area is low. Subsequent mitigation in the form of trial trenches has however been proposed to reduce the risk of encountering the site of a former bridge crossing downstream of Pont Begard footbridge.</p> <p>In accordance with TAN 15, Scheduled Monument Consent and Listed Building Consent will be obtained from Cadw prior to works commencing. The application for consent will include the proposed bridge tie-in, cladding materials to be in-keeping with the bridge and the PRoW which runs under the arch on its western side.</p>
Biodiversity	<p><b>Planning Policy Wales:</b> Chapter 5 Chapter 13</p> <p><b>Technical Advice Notes:</b> TAN5 TAN 10</p> <p><b>Denbighshire Local Development Plan:</b> RD 1 VOE 5</p>	<p>The St Asaph FRMS has been designed to minimise detriment to the natural environment. The planning application is supported by an Environmental Report, Preliminary Ecological Appraisal and Bat Survey report. Together these demonstrate that the overall benefits of the development outweigh any impacts on the nature conservation interest of St Asaph, however, where appropriate mitigation measures have been incorporated in to the Scheme design.</p> <p>An Extended Phase 1 Habitat Surveys has been undertaken to identify the main habitats and species with the Scheme area and to inform the detailed design. Protected species surveys have been undertaken for bats, badger, great crested newt and otter. Further surveys prior to construction will include updated checks for nesting birds, otter, badger and non-native (invasive) species. The findings of the ecological surveys are detailed in the accompanying Preliminary Ecological Appraisal.</p> <p>Mitigation proposed includes, for example, the requirement for pre-construction protected species surveys, seasonal restrictions on vegetation clearance and the implementation of Reasonable Avoidance Measures. An active badger sett has been identified near the proposed works at Dol Afon and will be retained; however a Badger Disturbance License will be obtained prior to works commencing in this location.</p> <p>The Scheme design minimises the removal of the most significant tree specimens and retains as many of the highest quality trees as is reasonably practicable. The design has ensured that, whilst removing a number of trees along the river corridor, there are sufficient trees remaining that the proposed tree</p>



		<p>removal will not impact upon flight lines and foraging habitat for bats.</p> <p>Himalayan Balsam has been identified along the river bank. An Invasive Species Management Plan will be produced to avoid spreading contaminated soil to new locations and a Scheme of post-construction eradication will be implemented.</p> <p>Measures to avoid and minimise impacts on biodiversity, which are outlined in the Environmental Report and EAP, include: timing works to avoid impacting sensitive species; undertaking light, dust and noise reduction methods, avoidance of in-channel construction works and adherence to landscaping and planting plans.</p>
Contaminated Land	<p><b>Planning Policy Wales:</b> Chapter 13</p> <p><b>Technical Advice Notes:</b> TAN 13</p> <p><b>Denbighshire Local Development Plan:</b></p>	<p>National Planning Policy Chapter 13 states that the planning system should be to ensure that development is suitable and that physical constraints on land, including the anticipated effects of climate change are taken in to account at all stages of the planning process.</p> <p>Geotechnical site investigation has revealed an unmarked area of historic landfill within St. Asaph Common, however this is not in an area required for excavation. A Phase 1 Contamination Risk Assessment is being undertaken; it is anticipated that this will reveal minimal risk of disturbance of any contaminated land within St Asaph Common.</p>
Human population and amenity (including noise, air quality, transport, tourism and recreation).	<p><b>Planning Policy Wales:</b> Chapter 4 Chapter 8</p> <p><b>Technical Advice Notes:</b> TAN 12</p> <p><b>Denbighshire Local Development Plan:</b> RD1 BSC 12 PSE 2</p>	<p>The St Asaph FRMS has been designed to respect the site and its surroundings, in particular those areas that are valued by local residents and aims to improve the amenity where possible. There are numerous community facilities located within the area benefitting from the proposed flood defences including St. Asaph library, cricket ground, playground and fire station).</p> <p>Safe and convenient access is provided wherever possible, including for the disabled. Wherever possible, all transport links (including PROWs and cycleways) will remain open throughout the works. Where this is not possible (for example for public safety where embankments are raised along the line of footpaths) access will be temporarily re-routed; diversions will be clearly signed and routes reinstated and re-opened as soon as possible on completion of the works. Adjacent to Roe Park, cycle route 84 will be re-routed upon completion of the works to run as far as Spring Gardens Bridge before diverting along the road. This will result in a longer length of the cycle path running along the riverside and is therefore considered an improvement.</p> <p>To minimise the potential effects of the temporary construction activity on traffic congestion and car</p>

		<p>parking in the town the following management measures will be implemented:</p> <ul style="list-style-type: none"> <li>- Preparation and implementation of a detailed Traffic Management Plan, which will identify the most appropriate routes and safety requirements for large vehicles accessing each section of the site.</li> <li>- Information updates to the local community and businesses on the construction works and likely timings, and</li> <li>- Clear signage of necessary diversions.</li> </ul> <p>In accordance with TAN 11, the EAP includes measures to avoid and reduce the potential impact upon amenity during construction work, including: restricted working and delivery hours; noise monitoring; use of appropriately sized and well-maintained equipment, and switching off machinery that is not in use.</p> <p>Good site practice will be employed during construction to minimise the generation of dust during earth moving and storage. This will include methods such as road sweeping and dust suppression methods for example, topsoil stockpiles will be compacted and dampened down if required to prevent dust generation.</p>
Sustainability	<p><b>Planning Policy Wales:</b> Chapter 4 Chapter 5 Chapter 6 Chapter 13</p> <p><b>Technical Advice Notes:</b> TAN 12</p> <p><b>Denbighshire Local Development Plan:</b> RD1 PSE 2</p>	<p>The St Asaph FRMS has been designed with the principles of sustainable development in mind.</p> <p>There are a number of employment and residential sites in the area that will benefit from flood protection and reduced flood risk could help promote further development. The defences themselves have been designed so that they can be raised again in future if necessary, thereby minimising the requirement for additional construction disruption in future.</p> <p>The following features will be implemented to ensure that waste is minimised and re-use of materials is maximised during construction.</p> <ul style="list-style-type: none"> <li>- Preparation and implementation of a Site Waste Management Plan;</li> <li>- Re-use of excavated material wherever possible within the development to minimise the use of imported fill;</li> <li>- Where imported fill is required, it will be sourced locally.</li> </ul>

		An Economic appraisal of the Scheme has been undertaken and includes an assessment of operational and maintenance costs. NRW's Operations Team have been closely involved and consulted throughout design development to ensure that it is acceptable to them.
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## 8.0 Conclusion

The purpose of the proposed St Asaph FRMS is to reduce the risk of flooding in St Asaph to a present day 1 in 200 (0.5%) annual chance. To achieve this, existing defences are to be raised and improved, and new defences built.

The proposals have been reviewed against the requirements of national policy and the statutory development plan. The principle of the development is acceptable and the proposals respond positively to the relevant planning policies with regard to flood risk, nature conservation, historic conservation, landscape, amenity, resource use and construction management and sustainability matters.

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## 9.0 Plans and Supporting Documents

Plans and documents submitted in support of this application are as follows (other documents are available upon request):

Document Title	Document Number
<b>Documents:</b>	
St Asaph FRMS Tree Survey, 2014	Tree Survey 1_May 2014
St Asaph FRMS Tree Survey, 2016	Tree Survey 2_May 2016
St Asaph FRMS Flood Consequences Assessment	122488-BVL-Z0-PB-RP-H-00002
St Asaph Bat Roost Potential Report 2015	St Asaph Bat Roost Potential Report 2015
St Asaph Great Crested Newt Report 2015	St Asaph GCN Report 2015
St Asaph FRMS Bat Survey Report 2016	122488-BVL-Z0-PB-RP-V-00003
St Asaph Preliminary Ecological Assessment 2015	St Asaph Preliminary Ecological Assessment 2015
St Asaph FRMS PAR Ground Investigation 2014	122488-BVL-Z0-PB-RP-G-00005
St Asaph FRMS PAR Ground Investigation 2016	122488-BVL-Z0-PB-RP-G-00007
St Asaph FRMS Preliminary Contaminated Land Assessment	122488-BVL-Z0-PB-RP-V-00004
St Asaph FRMS Environmental Report	122488-BVL-Z0-PB-RP-V-00001
<b>Drawings:</b>	
<b>Drawing Number:</b>	
St. Asaph FRMS Location Plan	122488-BVL-Z0-PB-DR-C-00001
WORKS LOCATION PLAN (RED LINE BOUNDARY) SHEET 1 OF 3	122488-BVL-Z0-PB-DR-V-00017
WORKS LOCATION PLAN (RED LINE BOUNDARY) SHEET 2 OF 3	122488-BVL-Z0-PB-DR-V-00018
WORKS LOCATION PLAN (RED LINE BOUNDARY) SHEET 3 OF 3	122488-BVL-Z0-PB-DR-V-00019
Site Compound Locations	122488-BVL-Z0-PB-DR-V-00020
Reach One General Arrangement Sheet 1 of 2	122488-BVL-Z0-PB-DR-C-23101
Reach One General Arrangement Sheet 2 of 2	122488-BVL-Z0-PB-DR-C-23102
Reach Two General Arrangement Sheet 1 of 3	122488-BVL-Z0-PB-DR-C-24101
Reach Two General Arrangement Sheet 2 of 3	122488-BVL-Z0-PB-DR-C-24102
Reach Two General Arrangement Sheet 3 of 3	122488-BVL-Z0-PB-DR-C-24103
Reach Three General Arrangement Sheet 1 of 2	122488-BVL-Z0-PB-DR-C-25101
Reach Three General Arrangement Sheet 2 of 2	122488-BVL-Z0-PB-DR-C-25102
Reach Four General Arrangement	122488-BVL-Z0-PB-DR-C-26101
Reach One Left Bank Sections Sheet 1 of 4	122488-BVL-Z0-PB-DR-C-23110
Reach One Left Bank Sections Sheet 2 of 4	122488-BVL-Z0-PB-DR-C-23111
Reach One Left Bank Sections Sheet 3 of 4	122488-BVL-Z0-PB-DR-C-23112
Reach One Left Bank Sections Sheet 4 of 4	122488-BVL-Z0-PB-DR-C-23113
Reach One New Inn Detailed Arrangement	122488-BVL-Z0-PB-DR-C-23121
Reach One Morfa Court/ Is Tefryn Access Ramp	122488-BVL-Z0-PB-DR-C-23124
Reach One BT Telephone Exchange Detailed Arrangement	122488-BVL-Z0-PB-DR-C-23126
Reach One BT Telephone Exchange Sections	122488-BVL-Z0-PB-DR-C-23127

Reach One Fountains Garage Detailed Arrangement	122488-BVL-Z0-PB-DR-C-23130
Reach One Fountains Garage Sections	122488-BVL-Z0-PB-DR-C-23131
Reach Two Left Bank Sections Sheet 1 of 2	122488-BVL-Z0-PB-DR-C-24110
Reach Two Left Bank Sections Sheet 2 of 2	122488-BVL-Z0-PB-DR-C-24111
Reach Two Right Bank Sections Sheet 1 of 2	122488-BVL-Z0-PB-DR-C-24115
Reach Two Right Bank Sections Sheet 2 of 2	122488-BVL-Z0-PB-DR-C-24116
Reach Two Community Centre Access Ramp Sections	122488-BVL-Z0-PB-DR-C-24123
Reach Two Bolwing Club Access Ramp Detailed Arrangement	122488-BVL-Z0-PB-DR-C-24125
Reach Two Bowling Club Access Ramp Sections	122488-BVL-Z0-PB-DR-C-24126
Reach Two Pont Begard Access Ramp Detailed Arrangement	122488-BVL-Z0-PB-DR-C-24127
Reach Two Pont Begard Access Ramp Sections	122488-BVL-Z0-PB-DR-C-24128
Reach Three Left Bank Sections	122488-BVL-Z0-PB-DR-C-25110
Reach Three Right Bank Sections Sheet 1 of 2	122488-BVL-Z0-PB-DR-C-25115
Reach Three Right Bank Sections Sheet 2 of 2	122488-BVL-Z0-PB-DR-C-25116
Reach Four Sections	122488-BVL-Z0-PB-DR-C-26110
Reach Four Rhuddlan Detailed Arrangement	122488-BVL-Z0-PB-DR-C-26111
Reach 4 Rhuddlan Sections	122488-BVL-Z0-PB-DR-C-26115
St Asaph FRMS Constraints Plan Sheet 1 of 3	122488-BVL-Z0-PB-DR-V-00001
St Asaph FRMS Constraints Plan Sheet 2 of 3	122488-BVL-Z0-PB-DR-V-00001
St Asaph FRMS Constraints Plan Sheet 3 of 3	122488-BVL-Z0-PB-DR-V-00001



## 10.0 Reference List

Archaeology Wales (2014): St Asaph Flood Alleviation Scheme Archaeological Desk-Based Assessment, Report Number 1289, November 2014.

Black & Veatch (2016): St Asaph FRMS Planning Application Flood Consequence Assessment, May 2016.

GBV JV Ltd (2015): St Asaph Flood Risk Management Strategy Preliminary Ecological Appraisal, July 2015.

GBV JV Ltd (2015): St Asaph Flood Risk Management Strategy Bat Roost Potential Survey Report, July 2015.

Natural Resources Wales / GBV JV Ltd (2015): St Asaph FRMS Project Appraisal Report, August 2015.

Natural Resources Wales (2016) St Asaph Flood Risk Management Scheme (FRMS) Environmental Assessment Summary

White Young Green (WYG) 2014: St Asaph FRMS PAR Ground Investigation 2014 Factual Report, January 2015.

White Young Green (WYG) 2016: St Asaph FRMS PAR Ground Investigation 2016 Factual Report, May 2016.

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