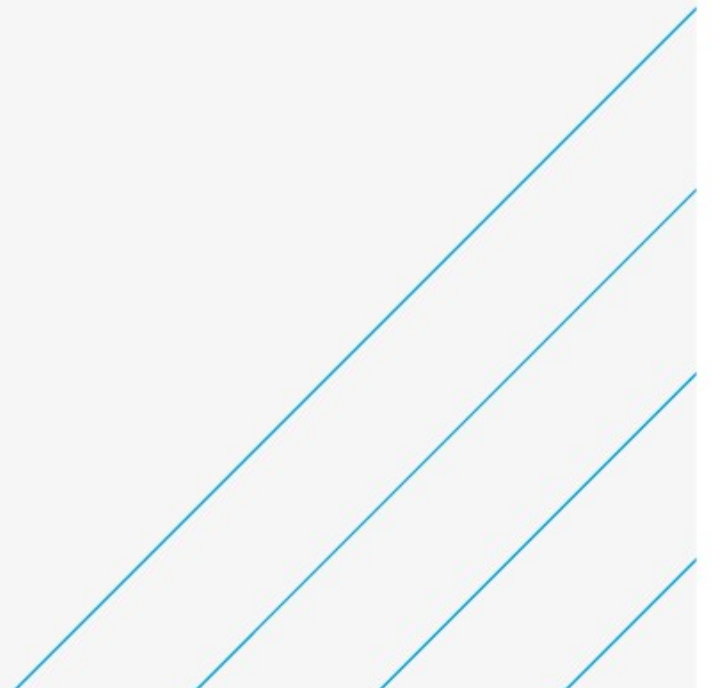


Skewen Flood Alleviation Scheme

EIA Screening Report

Neath Port Talbot County Borough Council

17 March 2023



Notice

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1. Introduction

On behalf of Neath Port Talbot County Borough Council (NPTCBC) Highways and Drainage Services (HADS), Atkins Ltd requests the Competent Authority (Neath Port Talbot County Borough Council) to adopt an EIA Screening Opinion to determine whether any of the potential environmental impacts of the Skewen Flood Alleviation Scheme (the Scheme) are likely to give rise to significant effects, and therefore require assessment as part of an Environmental Impact Assessment under the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the “EIA Regulations”).

This report reflects the requirements of the EIA Regulations and, in accordance with Regulation 5 of the EIA Regulations, this report contains:

- *“A plan sufficient to identify the land (see Appendix A);*
- *A description of the development (see Chapter 2), including in particular:*
 - *A description of the physical characteristics of the development and, where relevant, of demolition works;*
 - *A description of the location of the development, with particular regard to the environmental sensitivity of geographical areas likely to be affected;*
- *A description of the aspects of the environment likely to be significantly affected by the development;*
- *To the extent the information is available, a description of any likely significant effects of the Scheme on the environment resulting from:*
 - *The expected residues and emissions and the production of waste, where relevant; and*
 - *The use of natural resources, in particular soil, land, water and biodiversity; and*
- *Such other information or representations as the person making the request may wish to provide or make, including any features of the Scheme or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment”.*

In order to determine whether the Scheme is ‘EIA development’, regard must be given to the EIA Regulations.

In order to allow the Competent Authority to determine the need for EIA, this report provides a description of the site and Scheme, a review of the EIA screening criteria based on the EIA Regulations and a Scheme Overview Plan at Appendix A.

2. The Site

2.1. Site Location and Description

The site of the proposed scheme is located within the residential area of Skewen approximately 8.4km northeast of Swansea and 2.6km West of Neath in South Wales. The site is located entirely within the administrative boundary of Neath Port Talbot County Borough Council (NPTCBC).

Skewen is located west of the River Neath, which flows in a north-east to south-west direction within the Neath Valley, bound by steep slopes within the upper sections of the valley, with the north and south slopes exceeding 100m Above Ordnance Datum (AOD). The general topography of Skewen is such that it slopes down from west to east, with an average elevation of 38m (AOD) towards the west end at the screen in Caenant Terrace and down to 5m AOD towards the eastern side at the Tennant Canal.

The site is linear and covers approximately 1.3km, beginning at Caenant Terrace to the west centred on grid reference SS72689752 and culminates at the confluence of the Tennant Canal and River Clydach to the east of Neath Abbey.

The site is located within a densely populated housing area and the existing culverts and watercourses gravitate in a west to east direction. These watercourses eventually discharge into the Tennant Canal. There is an existing overflow weir on the Tennant Canal that overflows into the River Clydach and then onto the River Neath.

Directly north of the site is the Network Rail passenger railway line, which crosses Drummau Road and backs onto the residential properties along the north of Caenant Terrace. A mineral railway line is also present to the North of Monastery Road.

In and around the site there are a mixture of land uses including residential properties, Cwrt-Clwydi-Gwyn Care Home and commercial properties such as motor repair establishments.

The site incorporates transport infrastructure including the A4230 New Road, the B4290 Old Road, the South Wales mainline railway, a former colliery railway and the Tennant Canal.

2.2. Environmental Context

A desk-based review of online environmental information resources has been undertaken to establish the potential sensitivity of the site and its surroundings. This has been supplemented by information provided in the individual assessments set out in this chapter. The environmental context is summarised below:

- The Scheme is not located within an Area of Outstanding Natural Beauty (AONB);
- There are no internationally and nationally designated ecological sites within 1km of the proposed works area;
- The Scheme is approximately 375 m from the River Neath at its nearest point, is directly adjacent to the River Clydach and requires works in the Tennant Canal. All these watercourses are designated as Sites of Interest for Nature Conservation (SINC);
- The proposed development site includes parts of Pentrefrynnon and Gwlyptir Mynachlog Nedd which are designated as SINC adjacent to the Tennant Canal;
- The following 6 Wildlife/SINC sites within 1km of the site: Neath Estuary, Dyffryn Woods, Roman Way Reedbed, Neath Canal, Coed Bach a'r cwm and Square Pond
- A grade II listed bridge over the Tennant Canal adjacent to the proposed overflow pipe discharging into the canal;
- Tenant Canal: Skewen Cutting and Tramroad Bridge is a Scheduled Monument, the north-eastern edge of which is approximately 25m from the proposed overflow pipe discharging into the canal;
- The Grade II listed Clydach Aqueduct on the Tennant Canal is approximately 5m to the north of the proposed overflow weir structure to draw water off the canal and discharge into the River Clydach;

- The southern edge of Neath Abbey Scheduled Monument is approximately 5 m to the north of the proposed overflow weir structure to draw water off the canal and discharge into the River Clydach;
- The Natural Resources Wales (NRW) flood map indicates that much of the scheme area is at high risk from surface water flooding, hence the need to implement the proposed flood alleviation scheme. The proposed works adjacent to the Tennant Canal and the River Clydach lie within an area at high risk of fluvial flooding. It should be noted that Skewen is at risk of fluvial flooding from ordinary watercourses (non-main river sources) that are not available from NRW flood maps. These are shown from Atkins additional modelling output in Section 8 below;
- Under Policy BE 3 in the adopted local development plan the Tennant Canal is safeguarded from proposals which would prejudice its conservation, restoration and operation. The policy protects the setting of the canals and promotes the use of the canals for recreation, including encouraging walking and cycling, and for water supply; and
- Public right of way (PRoW) No. 12 9/1 runs near Caenant Terrace, PRoW No. 12 21/1 runs between St. Johns Terrace and Old Road, PROW No. 44 25/4 runs along an unnamed road north of, and over, the Tennant Canal and PROW No. 44 25/1 is adjacent to the works proposed adjacent to the River Clydach.

3. Proposed Development

3.1. Summary of proposed works

The location of the works is spread over several different areas of the Site as noted below:

- Caenant Terrace.
- Drummau Road.
- Whitegates Court.
- Old Road.
- Mineral Railway Crossing.
- Outfall into Tennant Canal
- Overflow weir from Tennant Canal into River Clydach.

An overview of the proposed Skewen Flood Alleviation Scheme is shown on Drawing No. NE04_001-ATK-GEN-SWMWREC-DR-CD-000001 in Appendix A. It should be noted that the works includes a surface water sewer connection at Drummau Road from the Coal Authority as part of their Goshen Park Minewater Remediation Scheme. This is a combined section of the works with NPTCBC.

The Scheme is required to mitigate flooding to properties along Caenant Terrace and the wider Skewen areas noted above and comprises of the following elements:

Caenant Terrace

- Construction of a new concrete surface water culvert which is laid below ground and buried in the road along Caenant Terrace to New Road;
- The existing damaged buried culvert in Caenant Terrace will be abandoned and grouted up with concrete.
- Construction of a new reinforced concrete inlet structure with metal trash screen above existing ground level at Caenant Terrace on the location of the existing inlet structure. This will pick up fluvial water flows from the watercourse along the south of the railway embankment and into the new replacement concrete culvert. The works at the inlet structure are detailed as follows:
 - Demolish existing above ground concrete retaining wall and inlet structure and install new reinforced concrete inlet structure, walls and metal trash screen above ground;
 - Remove existing metal fence line and reinstate after construction. Additional metal fencing and gates to be installed to secure the perimeter of the new inlet structure and provide access for maintenance;
 - Existing Welsh Water combined sewer below the ground near the inlet structure to be protected during construction and as part of the permanent works;
 - Grasscrete concrete blocks with topsoil and seed infill to be placed at ground level between the inlet structure and the footway on Caenant Terrace. This is to provide machine maintenance access to the new inlet structure;
 - Install above ground security fence, 1.8m high galvanized black powder coated weldmesh fencing with an access gate for pedestrians and two 3m wide lockable gates for plant around the inlet structure;
 - Areas to the east and west of the grasscrete access are to have raised kerbs and area behind will be topsoiled, seeded and planted;

Drummau Road

- Construction of a new below ground reinforced concrete 'U' shaped channel (with metal handrail above ground) underneath the existing railway arches and avoiding the existing bridge abutments to pick up overland and watercourse flows at Drummau Road. This will discharge flows into a new blockstone open channel to connect to the existing line of the watercourse. The existing culvert crossing beneath the Network Rail track will be abandoned and grouted up with concrete subject to Network Rail agreement;
- Construction of a new buried concrete flow monitoring chamber for the Coal Authority accepting nominal flows from the mine workings. Note, this is a joint section of the project with NPTCBC and the Coal Authority as part of their Goshen Park Minewater Remediation Scheme. The area will be secured with above ground metal fencing;

- Construction of a new reinforced concrete inlet structure with metal trash screen above ground on the watercourse located upstream of the access to the care home on Drummau Road;
- Replacement of the existing buried concrete culverts at the access point to the care home on Drummau Road with new buried precast concrete box culverts;
- Replacement of the existing below ground concrete 'U' channels with wider precast concrete 'U' channel units;
- Replace the existing buried surface water culverts with a precast concrete box culvert where Drummau Road meets New Road;

Whitegates Court

- Replacement and improvement of the existing concrete inlet structure and metal trash screen at Whitegates Court.
- Removal of the existing buried concrete culverts and corrugated steel culvert at Whitegates Court and replace with a new buried concrete culvert;

Old Road

- Demolition of the existing concrete inlet structure, walls and metal trash screen at Old Road;
- Construction of a new reinforced concrete inlet structure, walls and metal trash screen at the same location as the existing on Old Road;
- Construction of a below ground metal drainage grid in the existing compound area off Old Road to pick up overland flows. A tarmac speed hump will be constructed on Old Road to ensure the surface water flows are diverted to the grid and captured into the system and watercourse.

Mineral Railway Crossing

- Construction of a 1200mm diameter concrete buried culvert and connecting it to the existing culvert north of the freight railway line.
- Construction of a new buried concrete culvert offline of the existing structure and laid under the freight railway line by micro tunnelling / thrust bore techniques. A new buried concrete manhole will be built on the existing culvert to connect to the new culvert to act as an overflow to the canal.

Tennant Canal

- Construction of a new buried concrete overflow culvert into the Tennant Canal.
- Construction of a new concrete outfall headwall structure above ground and discharging into the Tennant Canal. To include concrete and rock scour protection in the canal at the point of discharge. These works will also include reprofiling of the existing channel and embankment near the Tennant Canal.
- Construction of a new buried concrete overflow weir and cascade from the Tennant Canal and into the River Clydach.

General Requirements

- Associated services diversions to be undertaken in advance of the above works.
- All fencing, where necessary, to be removed to accommodate the works and replace with new fencing on a like for like basis.
- There will be a general commitment to reinstatement of the areas along the construction route, and landscaping proposals will be developed to make good once the works are finished. Most of the reinstatement will be straightforward replacement with similar materials where the proposed culvert crosses highways.

Construction of the Proposed Development

It is anticipated that all construction activities will be limited to daytime hours (for example, 7:30am to 6:00pm from Monday to Friday, and from 8:00am to 1:00pm on Saturdays, or similar). The anticipated duration of the construction is approximately 12 months. It is important to note that the overall scheme will be split into sections and as a result a phased approach will be taken.

Temporary construction compounds will be required to facilitate construction of the scheme. At this stage the location of those compounds has not been agreed. Discussions with NPTCBC drainage department are ongoing to identify possible sites in the industrial area (near Trade Centre Wales) subject to agreeing compensation with the landowner. There is little space available in this urban area to establish construction compounds. Amenity grassland to the west of Neath Abbey has been identified as a potential location for the main compound. The mature tree screen on the western boundary of this site would be retained and protected during construction.

Smaller satellite compounds could be located in the following locations:

- at Caenant Terrace in the car park next to proposed inlet structure; however, this could be to provide parking for residents during the construction phase.
- on scrubland at Drummau Road between the railway line and Cwrt Clwydi Gwyn care home; and
- on an existing compound immediately to the west of the watercourse just before the watercourse passes under Old Road.
- The vacant portion of the compound at the motor repair business between Old Road and the railway line.

Subject to available space the compounds will incorporate an area for the establishment of a secure Site container / cabin for welfare, an area for the storage of plant and equipment and a storage area for materials, diesel and fuels. All refuelling of plant will take place in the site compounds and not near watercourses. All fuels will be stored and handled in accordance with best practice procedures.

The anticipated duration of the construction of the overall scheme is approximately 12 months but the scheme will be implemented in a phased manner such that the satellite compounds are unlikely to be required for the entire construction period. Once they are no longer needed, the site compounds will be removed and sites will be reinstated to their pre-construction condition.

3.2. Need for Development

Following detailed feasibility and hydraulic modelling, this scheme is put forward for works to provide capacity to alleviate flooding and not cause any further detriment in any design event to any third parties in compliance with NRW guidance¹. Properties on Caenant Terrace and in Skewen have experienced flooding due to the insufficient capacity in the existing culvert system to convey surface water during storm events. The existing culvert structure below Caenant Terrace is considerably smaller than those upstream, 450mm compared to between 750mm and 1050mm, creating a significant flow restriction. The culvert also is in poor structural condition, and debris has entered and caused partial blockages. Drummau Road also suffers from surface water flows, even more so following the mine workings incident in 2021. The properties on Old Road adjacent to the trash screen sit in a low lying area and have also been subject to regular internal flooding.

The implementation of the improved culvert system would reduce the frequency and severity of flooding. Currently, there is significant flooding predicted in the area during a 1 in 2-year flood although the exact flood extents for the different flood events are yet to be finalised. The proposed scheme aims to provide enough capacity within the culvert system to be able to convey the 1 in 100 year flow. This reduction in local flood risk will remove the associated stress, worry and wider health impacts and economic impacts associated with the current flooding issues. The improvement works that will be undertaken on the existing inlet structures would also improve safety and reduce maintenance callouts for the NPTCBC drainage team.

3.3. Permitted Development

Subject to the receipt of a negative EIA Screening Opinion, it is considered that the majority of the Scheme is permitted development. Many of the elements of the scheme fall within Schedule 2 Part 14 Class A of the Town and Country Planning (General Permitted Development Order) 1995. NPTCBC, as Lead Local Flood Authority, is a drainage body seeking to carry out development in, on or under watercourses or land drainage works in connection with the improvement, maintenance or repair of that watercourse or those works. The most southerly elements of the Scheme are not in, on or under any watercourse or land drainage works for which the Council is the drainage body. Therefore it is considered that the following elements of the Scheme are not permitted development and require an application for planning permission:

- Construction of a 1200 diameter culvert and connecting it to the existing culvert north of the freight railway line;
- Construction of a culvert offline of the existing structure, under the freight railway line by micro tunnelling / thrust bore techniques;

¹ [GN 028 Modeling for Flood Consequence Assessments \(naturalresources.wales\)](https://naturalresources.wales/guidance/guidance-028-modeling-for-flood-consequence-assessments)

- The provision of a new overflow into the Tennant Canal including reprofiling of the existing channel near the Tennant Canal and construction of a new outfall structure into the Tennant Canal; and
- Construction of a new overflow weir and cascade from the Tennant Canal into the River Clydach.

4. Screening Process

The EIA Regulations require that before consent is granted for certain types of development, an EIA must be undertaken. The EIA Regulations set out the types of development for which EIA is mandatory in Schedule 1 and other developments (defined in Schedule 2) which may require an EIA if they exceed specified thresholds and have the potential to give rise to significant environmental effects.

The following should be considered in determining whether the proposed Skewen Flood Alleviation Scheme constitutes EIA development:

- If the proposed development is of a type listed in Schedule 1;
 - If not, whether the proposed development is of a type listed in Schedule 2; and, if so, whether:
 - any part of it is located within a sensitive area; or
 - it meets any of the relevant thresholds and criteria set out in Schedule 2; and
 - it would be likely to have significant effects on the environment.

These points are explored further in this section with reference to the EIA Regulations.

4.1. Screening Process

4.1.1. Schedule 1 Projects

EIA is mandatory for projects listed in Schedule 1 of the EIA Regulations. Schedule 1 developments are large scale projects for which significant effects would be expected and comprise developments such as new airports and power stations.

The proposed development is not of a type listed in Schedule 1 and is reviewed in the following section to determine whether it is Schedule 2.

4.1.2. Schedule 2 Projects

The EIA Regulations define “Schedule 2 development” as development, other than exempt development, of a description mentioned in column 1 of the table in Schedule 2 “where—

- a. *any part of that development is to be carried out in a sensitive area; or*
- b. *any applicable threshold or criterion in the corresponding part of column 2 of that table is respectively exceeded or met in relation to that development;”*

Sensitive Areas considered in the EIA Regulations include:

- Sites of Special Scientific Interest (SSSI) and European Sites;
- National Parks, the Broads, and Areas of Outstanding Natural Beauty (AONB); and
- World Heritage Sites and Scheduled Monuments.

In certain cases, local designations which are not included in the definition of sensitive areas, but which are nonetheless environmentally sensitive, may also be relevant in determining whether an assessment is required. Furthermore, in considering the sensitivity of a particular location, regard should also be had to whether any national or internationally agreed environmental standards are already being approached or exceeded.

The proposed works do not fit into any of the development descriptions listed in Column 1 of the table in Schedule 2 of the Regulations. The closest description is found in Part 10(h) infrastructure projects which includes ‘urban development projects’ such as flood -relief works. The site area for the works is likely to be above the 1ha size threshold in Column 2 of the table and so the Scheme is considered to be a ‘Schedule 2 Development’.

For Schedule 2 development EIA is required if the development is ‘likely to have significant effects on the environment by virtue of factors such as its nature, size or location’.

4.2. Environmental Topics Considered

The following sections set out a review of the above criteria and requirements and specifically addresses the Scheme in relation to the following topics:

- Landscape/Visual Amenity

- Construction Noise/Vibration
- Flood Risk & Water Quality
- Construction Traffic
- Waste and Ground Conditions
- Built Heritage and Archaeology
- Ecological Impact Assessment

5. Landscape and Visual Amenity

Construction activities associated with all aspects of the Scheme, including construction compounds will require temporary above ground works which will have a temporary adverse effect on landscape character and on the visual amenity of local residents, users of green spaces and people travelling through the area. The construction activities will introduce small scale, localised and temporary uncharacteristic features such as excavators, dumpers and associated workforce.

Some elements of the Scheme will involve loss of vegetation, including along watercourses. Where appropriate trees and vegetation which perform a screening function or make a valued contribution to local landscape character will be protected to prevent harm during construction e.g. the mature trees located along the western boundary of the proposed construction compound on Monastery Road.

The Scheme is an engineering project to manage fluvial flood risk and surface water drainage. As such its aesthetic design is utilitarian and simple. The sizing of the various elements that form part of the Scheme, such as inlet structures and open channels is determined by the capacity required to manage flood risk so the various elements will be slightly larger in scale than existing elements.

The replacement culverts will be buried and so, once constructed, they will generally have no impact on landscape character or visual amenity. The above ground elements of the Scheme, such as inlet structures, trash screens, fencing and open channels, will introduce new above ground features that will be permanently visible. The Scheme has been carefully designed to ensure its visual impact is as limited as possible whilst still providing flood alleviation to neighbouring properties. On completion of the engineering works the areas along the construction route will be reinstated and landscaping proposals will be developed to mitigate for the loss of trees and other soft landscaping.

For the following reasons the effects from construction of the Scheme on landscape character and visual amenity are not expected to be significant:

- the short duration of construction activities;
- the limited visual envelope of the development site;
- the Scheme largely entails replacing existing features with slightly larger ones;
- the colours and types of materials proposed in the construction of above ground elements will be the same as, or similar to, existing features
- a landscape mitigation strategy will be adopted to mitigate for loss of vegetation.

There would be no significant effects on landscape character or visual amenity from operation of the Scheme.

6. Noise/Vibration

6.1. Baseline Conditions

The Scheme is located primarily within the residential area of Skewen. There are numerous noise sources within proximity to the Scheme including:

- A railway line and associated train activity on the South Wales Main Line which runs trains to Swansea and West Wales and a separate freight line. There is no strategic noise mapping from railway lines available for the Skewen area.
- Various small commercial enterprises e.g. a motor repair centre
- The local road network, including the A4230 and the B4290 which are the main key transport routes through Skewen.
- The A465 being near the proposed Tennant Canal works.

6.2. Potential Effects

A qualitative review of the potential effects in relation to construction noise and vibration has been carried out. No detailed modelling or assessment work has been carried out.

Construction

Construction of the Scheme will result in an increase in noise from construction traffic and plant noise associated with general construction activities. All construction noise will be managed through standard best practice measures including through adopting standard working hours.

Some of the works are located adjacent to sensitive noise receptors including residential properties.

All construction noise impacts will be short term, temporary and fully reversible when works are completed.

Operation

Following construction, routine maintenance of the Scheme assets, will consist of inspections of the assets and management of vegetation along the watercourse. This will likely be undertaken by hand/trimming and will not generate large amounts of noise. Therefore, no operational impacts from noise and vibration are anticipated.

6.3. Mitigation

To minimise the disturbance due to noise during the construction phase of the Scheme, the following measures will be implemented:

- Construction working hours will be limited to between 7:30 and 18:30 Monday to Friday, and 08:00 and 13:00 on Saturdays. No construction activity will be undertaken on Sundays or Public Holidays.
- All equipment will be well-maintained and, where possible, will be used in the mode of operation that minimised noise. Plant and equipment will be shut down when not in use. Mobile construction plant and compounds will be located, as far as reasonably practicable, away from adjacent occupied buildings or as close as possible to noise barriers or site hoardings to provide additional screening from sensitive noise receptors. Materials will be handled in a manner than minimised noise with minimal drop distances when offloading material.
- Reversing alarms will incorporate one of the following features where practicable: directional sounders, broadband signals, self-adjusting sounders, flashing warning lights. Alternative comparable systems may be used. Vehicles will not wait or queue on the public highway with engines running. Only designated lorry routes will be used, in normal working hours where possible.

With the adoption of standard working practices, no significant noise effects during the construction of the Scheme are likely.

7. Traffic, Access and Land Use

7.1. Baseline Conditions

Part of the proposed development site crosses the A4230 (St. Johns Terrace) and B4290 (Old Road) which connect northern areas of Swansea with Skewen and Neath further east.

The majority of the Scheme lies within the residential area of Skewen. At the downstream end the Scheme passes by commercial land uses and by the Tennant Canal which has a towpath used for recreation by walkers and cyclists.

The works are required adjacent to, beneath and in close proximity to existing Public Right of Ways (PRoWs). PRoW No. 12 9/1 runs below the railway embankment within a subway and joins Caenant Terrace on its eastern section. PRoW No. 12 21/1 and PRoW No 44 24/1 run between the junction of St. Johns Terrace and Drummau Road to Old Road. PROW No. 44 25/4 runs along an unnamed road north of, and over, the Tennant Canal. PROW No. 44 25/1 is adjacent to the works proposed adjacent to the River Clydach.

7.2. Potential Effects Construction

During construction, there will be an increased level of traffic and plant on the roads as a result of delivering personnel, materials and plant to site. The A4230 highway provides the principal route into the area. Access for construction traffic to the works will be from the local highway network including the A4230 and the B4290. Construction traffic will also use Caenant Terrace, Drummau Road and an unnamed road off Monastery Road.

Temporary footway/lane closures will be required along Drummau Road, along the A4230 St. Johns Terrace and the B4290 Old Road during works on or adjacent to those roads. Temporary closure of the towpath along Tennant Canal is also likely to be required to construct the overflow weir into the River Clydach. Temporary and minor diversions will be put in place to ensure safe pedestrian access is maintained during construction of the Scheme. It is envisaged that vehicular access along the affected roads will be maintained for the duration of the construction works, with the lane closure controlled by either temporary traffic signals or a banksman.

Due to low construction traffic volumes and the limited duration of the works, the Scheme will not materially affect the operation of the local road network or significantly affect access for local residents or people accessing commercial uses and recreational facilities in and around the development site. A separate highways order from the highway authority will be requested for the traffic management works. Once construction is complete the roads will be returned back to their original state.

Public Rights of Way Diversions

Temporary diversions of the following PRoW are likely to be required during the implementation of certain elements of the works to allow safe access and egress for the general public to be maintained:

- PRoW No. 12 9/1;
- PRoW No. 12 21/1 and PRoW No 44 24/1; and
- PROW No. 44 25/4.

Operation

Once operational the transport implications of the Scheme will be limited to regular maintenance and asset survey activities undertaken by NPTCBC. The Scheme works will act to reduce the frequency of future maintenance required for each of the assets. Therefore, there will be no discernible changes in traffic movements as part of operation of the Scheme.

Once construction of the Scheme is complete users of public rights of way and other footpaths should benefit from the expected decrease in flood risk as a result of the Scheme.

7.3. Mitigation

To reduce disruption to the road network due to the increase in vehicle movements during construction deliveries of plant and large volumes of material should be organised to take place between 9:30hrs and 16:00hrs to minimise the effects of additional traffic on the roads. So far as is reasonably practicable, site

deliveries and collections are to be scheduled at suitable times during the day to avoid, anti-social hours, school rush hours, work rush hours and local organised events where the volume of local traffic may increase.

A designated access route for the movement of plant and equipment from the compound area to the location of the proposed works will be established within the extent of the site.

Indicative traffic volumes during construction and the duration and timing of lane closures will be captured for each element of the Scheme within a dedicated Traffic Management Plan (TMP), which will be managed by the contractor throughout the duration of the construction works.

Pedestrian and traffic management measures will be implemented at the site in line with the TMP. The construction of the Scheme will be phased to minimise disruption to all road users.

Temporary fencing and signage will be erected to maintain safe access for footpath users. Where necessary new temporary hard standing surfaces will be used to accommodate safe access for individuals.

Where works cross access points to commercial and residential properties, provision shall be made to ensure temporary access is provided at all times. All roads, pavements, road markings, driveways and access points will be reinstated as necessary.

On completion of the works, any land property or premises disturbed by the construction works, including the compound area, will be fully reinstated to their pre-construction condition.

Measures to avoid or minimise effects on the amenity of adjacent land uses will be specified in a Construction Environment Management Plan (CEMP). The CEMP is likely to specify no night-time working, however if this is required for specific sites, night working will be reviewed with the possibility of this occurring on weekday nights only. The contractor will remain in continuous liaison with the local residents and businesses to ensure disruption is minimised. If required, localised hoarding / screens will be erected to segregate potentially noisy and dusty operations from adjacent land uses and as a means of restricting access to the site.

In conclusion, with good construction practice measures in place, the construction and operation of the Scheme will not have significant effects on operation of the local road network or public rights of way or on land use.

8. The Water Environment

Fluvial and Surface water flood risk

Fluvial and surface water flows down through the urban area of Skewen via a number of drainage channels comprising of culverts and/or open channels. The capacity of the culverts and open channels are insufficient to accommodate flood flows. The fluvial and surface water eventually discharge to the River Clydach.

The NRW flood mapping (shown in the Figure 8-1 below) indicates that land alongside the culverts and open drainage channels through Skewen are a high to low risk of surface water flooding depending on the location. High surface water flood risk is defined by NRW as a greater than 1 in 30 (3.3% AEP) annual exceedance probability (AEP) event. Low means that each year, this area has a chance of flooding between 1 in 100 (1% AEP) and 1 in 1000 (0.1% AEP). Medium means that each year, this area has a chance of flooding between 1 in 30 (3.3% AEP) and 1 in 100 (1% AEP). These sources of flooding are widespread within the Skewen area and predominantly get worse the further downstream due to the low lying nature and insufficient capacity in the drainage network to convey the flows from upstream.

NRW Flood Risk mapping can be accessed at the following link:

[Geocortex Viewer for HTML5 \(cyfoethnaturiolcymru.gov.uk\)](https://geocortex.naturalresources.wales/cyfoethnaturiolcymru.gov.uk)

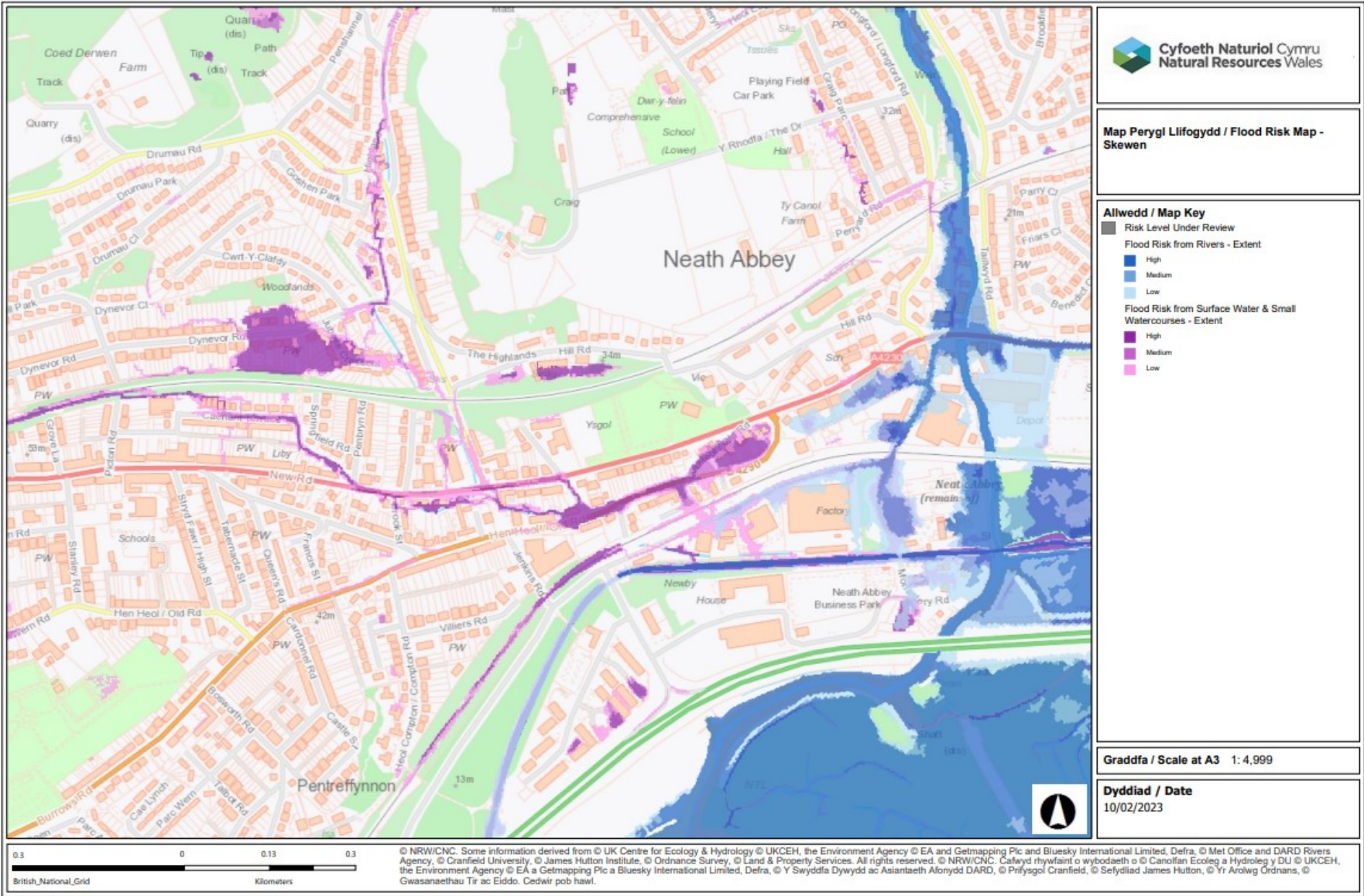


Figure 8-1 - Natural Resources Wales Flood Risk Map - surface water flood risk

The baseline modelling undertaken shows more extensive flooding to Skewen than the NRW extents shown in Figure 8-1 above. These flood extents were developed using the TUFLOW hydraulic modelling package making use of available survey datasets. Figure 8-2 and 8-3 below shows the current day flood extents for both the 1 in 2 (50% AEP) and the 1 in 100 (1% AEP).

The hydraulic model has confirmed what has been seen to occur regularly at Skewen over recent years with significant flooding occurring as a result of undersized drainage infrastructure/culverts.

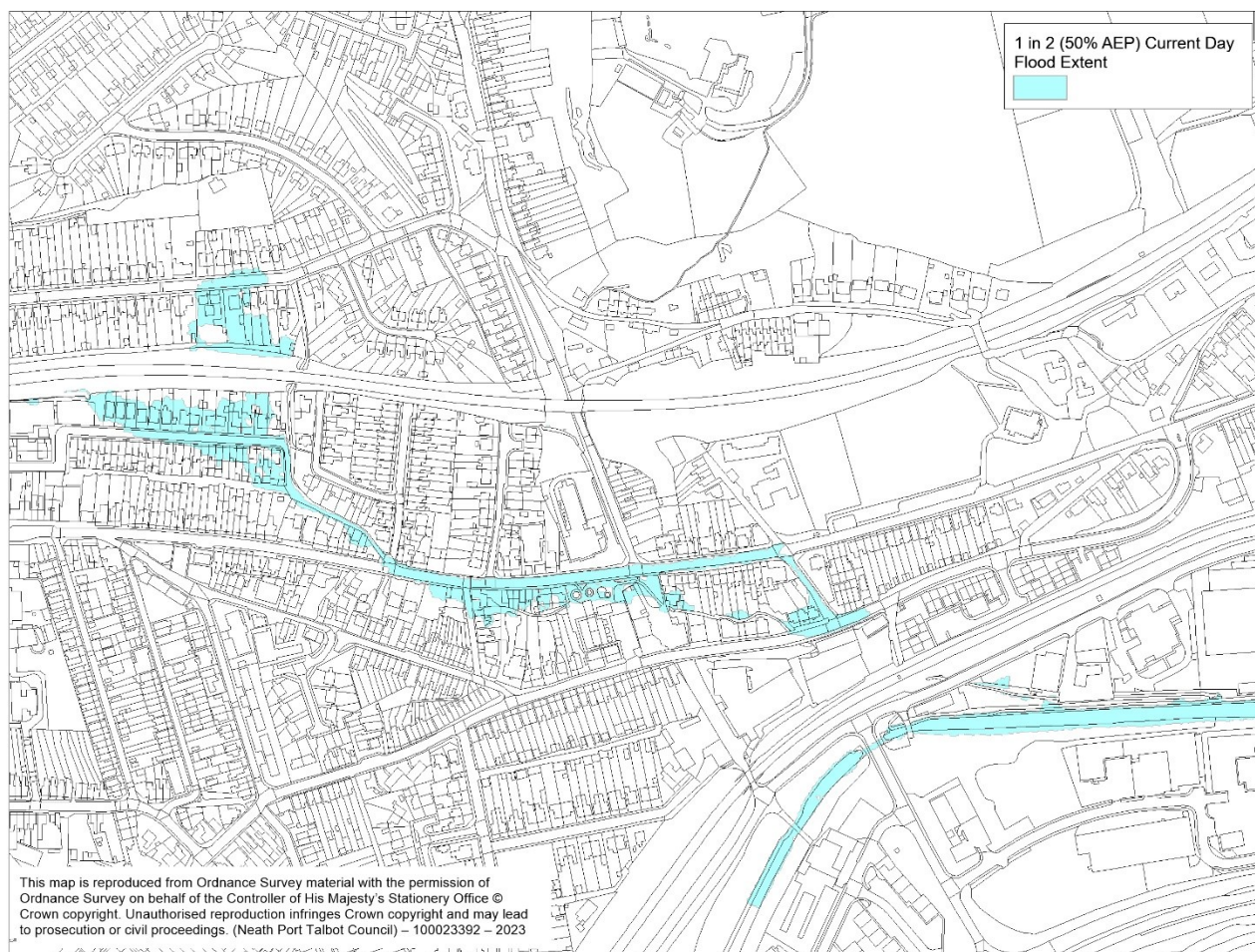


Figure 8-2 – Q2 Flood extents predicted by the TUFLOW hydraulic modelling package.

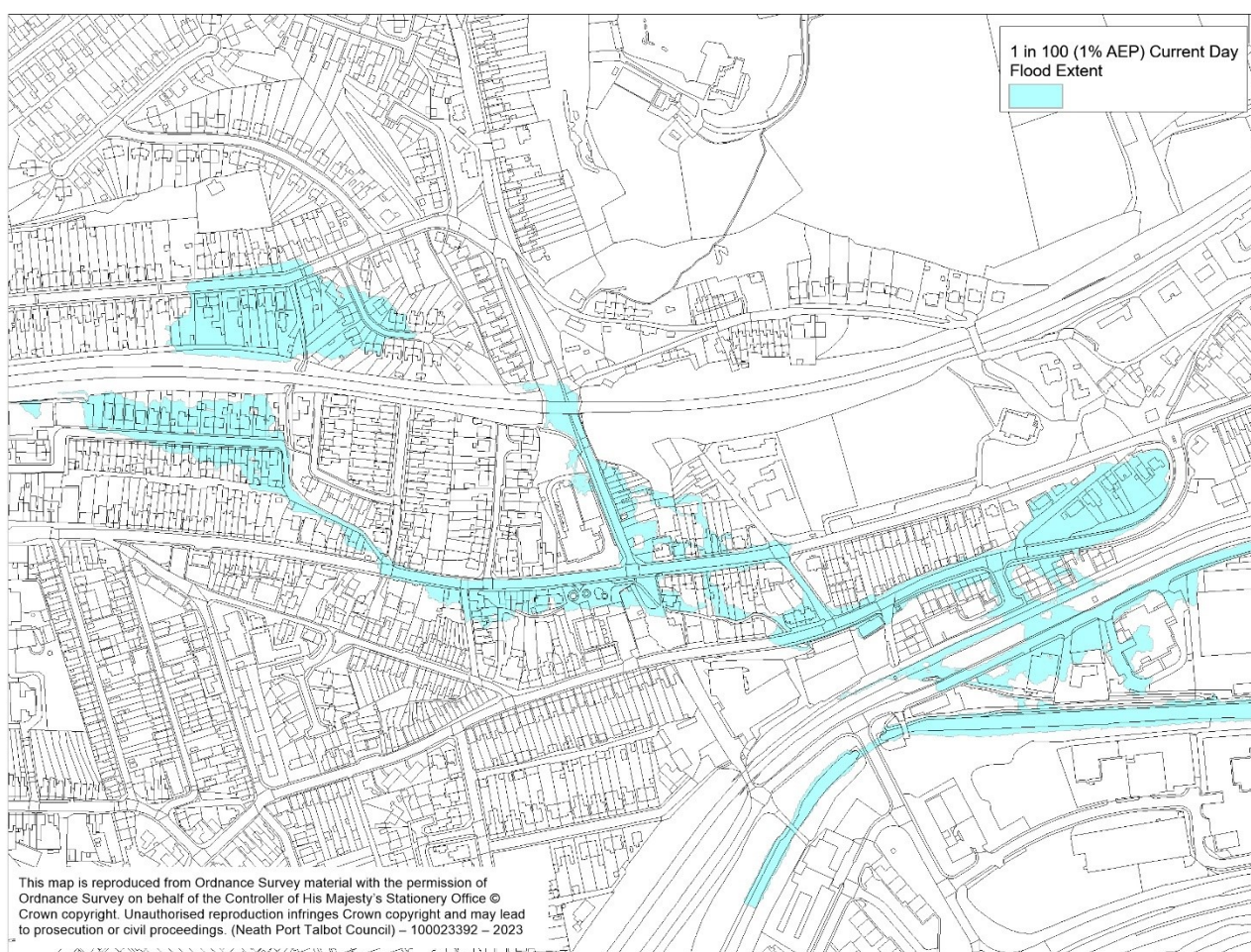


Figure 8-3 – Q100 Flood extents predicted by the TUFLOW hydraulic modelling package.

The proposed works are designed to provide additional capacity in the drainage system to alleviate fluvial and surface water flooding of properties on Caenant Terrace and along Drummau Road, Whitegates Court and Old Road. The implementation of the improved culvert system would reduce the frequency and severity of flooding in the area. Currently the threshold of flooding is below a 1 in 2-year flood (50% AEP). The proposed scheme is designed to ensure that there is no internal flooding to any properties in a 1 in 100year (1% AEP) flood event. The scheme would ensure no detriment to any third parties during any over design events up to the 1 in 1000 (0.1% AEP). This reduction in local flood risk will remove the associated stress, worry and wider human health impacts and economic impacts associated with the current flooding issues.

Very localised elevated flood levels to the canal and to the River Clydach may occur but these will not impact any third parties. The location of the new outfall to the Clydach is within the tidal reach of the river.

Recent hydrological analysis suggests that the areas will flood more frequently if no works are implemented as a result of the impacts of climate change. Whilst hydraulic modelling is yet to be finalised for the scheme, the assessment undertaken to date concludes that the consequences of flooding associated with the proposed scheme are acceptable and that the flood risk can be managed.

The Scheme is unlikely to have any significant environmental effects in term so flood risk.

Water Quality

During construction of the Scheme there is potential for adverse effects on surface water quality through the potential release of contaminants. Any development activity in proximity to existing or proposed drainage channels has the potential to impact surface water quality via the following mechanisms:

- Release of suspended solids into the drainage network, together with any associated contaminants absorbed to the particles;
- Release of contaminated groundwater pumped from dewatered excavations into adjacent drainage channels; and
- Sudden release of 'slugs' of free hydrocarbon products and/or other contaminants within drains or services encountered by construction activities.

The Coal Authority has confirmed the minewater connection does not have potential to affect water quality in the canal and/or the river.

8.1. Mitigation

The appointed contractor will be asked to prepare a Work Method Statement to support a temporary Ordinary Watercourse Consent (OWC), which will be submitted to the Local Authority that will incorporate standard pollution prevention measures such as;

- Minimising the potential of runoff by minimising the area over which materials are stockpiled;
- Covering/sealing exposed soil/spoil to reduce silt runoff;
- Preventing spoil from being stockpiled for prolonged periods;
- Controlling carefully the use of cement and concrete;
- Provision of measures to control potentially contaminated surface water runoff from construction activities;
- Provision for the proper storage and handling of all on-site chemicals, fuel and oil, for example away from watercourses and drains with adequate hardstanding and bunding to contain accidental spillage/leakages entering controlled waters;
- Ensuring that appropriate consents/licences are obtained in accordance with relevant legislation.

With the adoption of the mitigation measures listed above, the Scheme is unlikely to have any significant effects on water quality.

9. Waste & Ground Conditions

A Generic Quantitative Risk Assessment (GQRA) has been undertaken drawing information from the ground investigation and a desk study to develop a Conceptual Site Model and to assess contamination risks.

9.1. Baseline Conditions

The following potential contamination sources have been identified

On-site

- Made Ground associated with the construction and operation of roads and railways including New Road and Old Road and Railway; and,
- Made Ground associated with the construction, operation and demolition of former historical commercial and industrial land uses including a railway station, timber yard and tramway.

Off-site

- Made Ground associated with the construction, operation and demolition of former historical commercial and industrial land uses within 500 m of the site; and
- Made Ground associated with the construction and operation of current industries including an electricity substation (50 m north), Neath Abbey Business Park (100-300 m southeast) and a Depot and Tank (230 m southwest).

Potential receptors to the sources of contamination include the following:

Human health

- workers during the construction or maintenance phases; and
- residents, workers, and members of the general public.

Controlled Waters

- On-site surface water receptors including an unnamed canal, Tenant Canal, the River Clydach and the River Neath
- Groundwater

Property

- On-site existing and future below ground infrastructure; and
- Off-site residential / commercial properties within the surrounding 500 m.

9.2. Potential Significant Effects

Based on the results of a ground investigation, laboratory testing and a risk assessment, the overall contamination risk associated with the site is considered to be low to human health receptors and moderate to controlled waters receptors under the current and future end use. This is due to the fact site works will only be temporary, site works will only be accessible by site workers and will not be accessible for recreational use.

During the construction phase waste will be generated through demolition works, unused building materials and from packaging of construction materials. Due to the small scale of the proposed works the volumes of waste generated will be minor and is unlikely to cause significant environmental effects.

The proposed Scheme may cause physical effects associated with stripping of topsoil, vegetation clearance, earthworks, temporary stockpiling of materials and construction of new infrastructure. There is likely to be a temporary increase in soil erosion with the potential for increased runoff during earthworks, carrying a high sediment load to affect surface water receptors.

9.3. Mitigation

The following mitigation measures will be incorporated into the construction process:

- Minimising the area and duration of soil exposure and timely reinstatement of vegetation or hardstanding to prevent soil erosion and reduce temporary effects on soil compaction;
- adoption of appropriate health and safety measures, practices and procedures during construction to mitigate potential risks to construction workers and visitors;
- adoption of appropriate best practice environmental management during construction, e.g. minimisation of dust generation and migration, to mitigate potential risks to controlled waters, visitors and surrounding offsite users; and,
- vigilance to be maintained throughout the works for potential asbestos containing material at surface or other unexpected contamination during site clearance and earthworks in areas not previously investigated

In accordance with environmental legislation, all waste generated from the works shall be, where practicable, segregated and disposed of to a licensed tipping facility utilising registered and licensed waste disposal. A site waste management plan will be prepared to minimise waste generation and maximise re-use and recycling of any waste generated. In the case of hazardous waste, all products shall be removed and disposed of in accordance with relevant local enforcing bodies.

9.4. Conclusion

The contamination risk associated with the proposed works is considered to be low for human health receptors and moderate to controlled waters receptors. Assuming good practice environmental and health safety measures are adopted, the contamination risks are unlikely to result in significant environmental effects.

Due to the small volume of waste generated during construction, and with the adoption of good practice, the environmental effects of waste generation will not be significant.

10. Archaeology and Built Heritage

10.1. Baseline Conditions

A desk-based study has been undertaken in order to identify whether the site is located within or in proximity to any statutory designated heritage assets. Information has been sourced from the Historic Wales website [Historic Wales \(arcgis.com\)](https://historicwales.gov.uk/).

There are no designated heritage assets within the site.

The following Grade II Listed Buildings lie in proximity to the proposed scheme:

- Tramroad bridge over the Skewen Cutting on the Tennant Canal (approx. 100 m to the south west of the proposed overflow into the Tennant Canal);
- The bridge over the Tennant Canal north of the former Mines Royal Copper Works; (immediately to the west of the proposed overflow into the Tennant Canal);
- A bridge over the Tennant Canal to the south of the entrance to Neath Abbey (approx. 130 m to the west of the proposed overflow weir structure to draw water off the canal and discharge into the River Clydach)
- The River Clydach aqueduct on the Tennant Canal; (approx. 5 m to the north of the proposed overflow weir structure to draw water off the canal and discharge into the River Clydach); and
- A bridge over the River Clydach to the South of Neath Abbey. (approx. 100 m to the south of the proposed overflow weir structure to draw water off the canal and discharge into the River Clydach)

The Tennant Canal: Skewen Cutting and Tramroad Bridge is a Scheduled Monument the north-eastern edge of the designated site is approximately 25m to the southwest of the proposed overflow pipe discharging into the canal.

Neath Abbey is a Scheduled Monument and the southern edge of that monument is approximately 5 m to the north of the proposed overflow weir structure to draw water off the canal and discharge into the River Clydach.

10.2. Potential Significant Effects

No direct impacts on designated heritage assets are anticipated. Through vegetation clearance or through the introduction of new features in the built environment, the above ground works could potentially affect the setting of designated heritage assets during and post construction. The setting impacts of the proposed works along the Tennant Canal will be generally limited by the distance to designated assets or intervening features.

Any potential impacts upon known or unknown heritage assets will be managed by implementing best practice working methods on site.

Due to the limited duration of the construction works, the limited scale of the works along the Tennant Canal or their distance from designated assets and provided good practice mitigation measures such as reinstatement of landscaping takes place, none of the identified effects are likely to be significant.

It is not anticipated that separate applications for Scheduled Monument consent or for listed building consent will be required for any part of the Scheme.

11. Biodiversity

An Ecological Impact Assessment (EclA) of the site was completed in January 2023.

11.1. Potential Significant Effects

Construction Impacts

The ecological impact assessment concluded that there are no designated sites in the proposed site and no designated sites would be directly affected with respect to habitats.

The proposals would result in permanent loss of habitats including hard standing, amenity grassland, dense/scattered scrub and scattered trees which are of negligible nature conservation value.

Without mitigation, the Scheme has the potential to have slight adverse impacts on bats, badger hedgehog, otter, reptiles, amphibians, breeding birds and invertebrates.

There is potential for invasive non-native species (INNS) to be directly affected by the works.

Operational Impacts

During the operation phase, the Scheme will be subject to maintenance to ensure the drainage scheme continues to work effectively. The maintenance of the Scheme is not anticipated to give rise to any material ecological impacts.

11.2. Potential Mitigation and Enhancement

Indirect impacts on designated sites both through construction and operation would be managed through construction best practice and appropriate scheme design.

The extent of loss of habitats would be reduced as far as possible in scheme design with retained areas subject to more ecologically friendly management regimes and ecological enhancement measures. Indirect construction impacts would be addressed through best practice measures such as the following:

- Restrictions to night-time working;
- Use of directional and low-level lighting to reduce light spill into adjacent habitats;
- Careful placement of compounds, storage areas etc. and use of noise barrier fencing to reduce noise impacts within retained habitats;
- Avoidance of re-fuelling and parking of vehicles close to watercourses wherever possible;
- Production and implementation of a suitable pollution and sediment management plan;
- Provision of spill kits close to high-risk areas for rapid deployment in the event of a pollution event;
- Pre-construction surveys for breeding birds if work is undertaken during the active season (late February to early September inclusive, weather dependent).
- An ecological method statement detailing the clearance methodology for specific species and methodology for invasive species removal.

11.3. Conclusion

The proposed Flood Alleviation Scheme is not considered to be EIA development in regard to likely ecological impacts.

12. Conclusions

The report provides information to support the request for a Screening Opinion from NPTCBC, under Regulation 6 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017, as to the potential need for an Environmental Impact Assessment (EIA) for the works to alleviate flood risk at Caenant Terrace, Whitegates Court, Drummau Road and Old Road.

The assessments provided in sections 5-11 provide a thorough evaluation of the potential impacts of the Scheme during construction and operation, concluding that following the implementation of mitigation measures regarded as good practice, the 'residual' environmental effects of the Scheme are unlikely to be significant. Therefore, a statutory environmental impact assessment is not considered to be necessary.

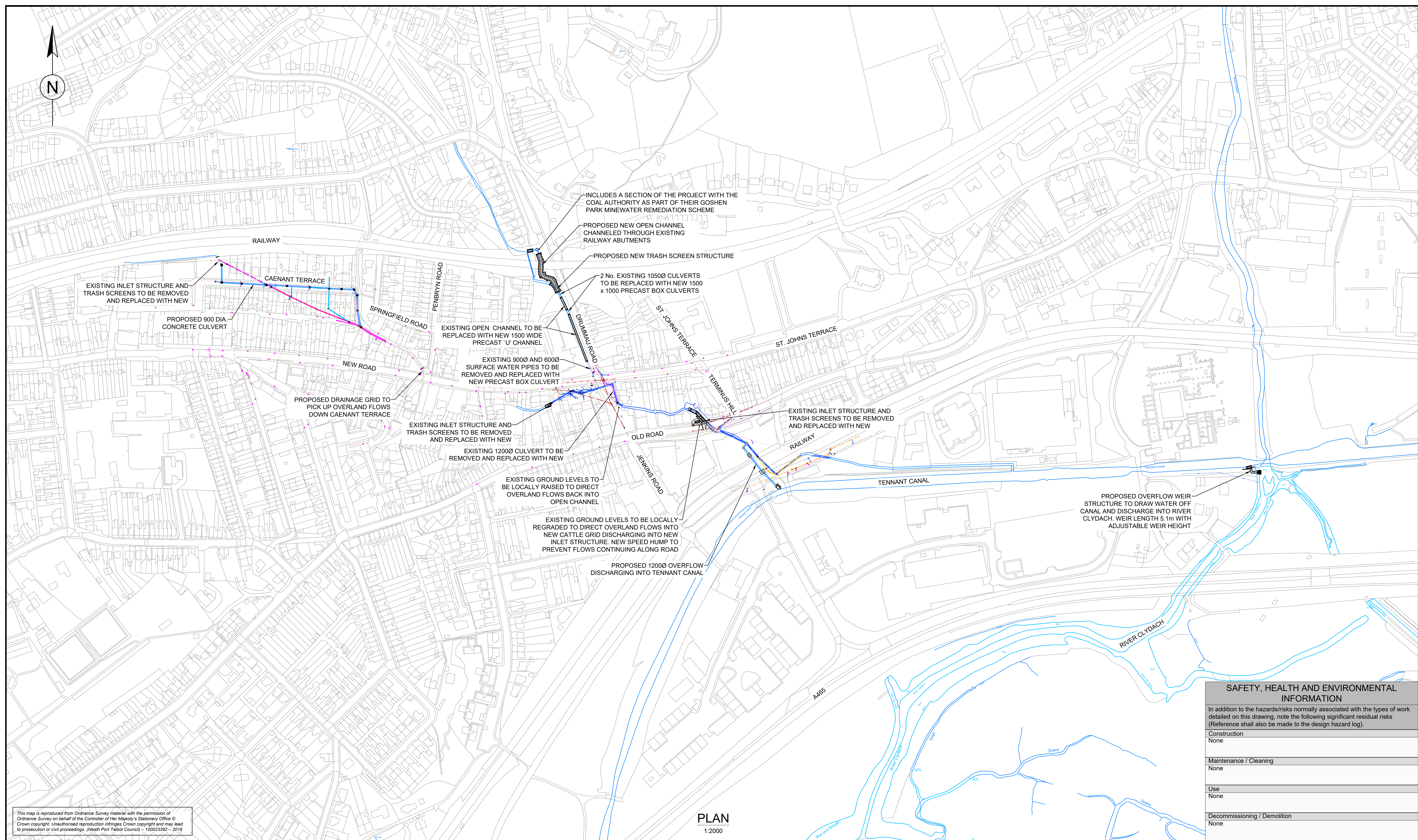
It is respectively requested that NPTCBC provides an EIA screening opinion on the need for an environmental impact assessment of the Scheme.

Appendices



Appendix A - Proposed Scheme General Arrangement Drawing

Drawing No. NE04_001-ATK-GEN-SWMWREC-DR-CD-000001



1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.

Description							Drawing Suitability		Status		Project Title	
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date	APPROVED - PUBLISHED		A1		CAENANT TERRACE	
Description							 SNC • LAVALIN ATKINS Member of the SNC-Lavalin Group Copyright © SNC Lavalin (2019)				Drawing Title	
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date						
Description												
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Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date						
Description							 NEATH PORT TALBOT COUNTY BOROUGH COUNCIL				Drawing Number Project Originator Volume NE04_001 - ATK - GEN - SWMWREC - DR - CD - 000001	
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date						
Description												
For EIA Screening Opinion											Location Type Role Number	
Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date						
A1	C01	DJW	MT	Reviewed RAM	Authorised RAM	Issue Date 17/03/23						

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