



GRANDISON FLOOD ALLEVIATION SCHEME

Notice

This document and its contents have been prepared and are intended solely as information for Neath Port Talbot Council and use in relation to the construction traffic management plan for the Grandison Flood Alleviation Scheme.

AtkinsRéalis UK Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 21 pages including the cover.

Document history

Document title: Construction Traffic Management Plan

Document reference: NE05_001-ATK-EAC-SWMWREC-RP-LP-000002

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	Issued for consultation	RAM	KH	NC	RAM	January 25

Client signoff

Client	Neath Port Talbot Council
Project	Grandison Flood Alleviation Scheme
Job number	5129793
Client signature/date	



Contents

1.	Background.....	5
1.1	Planning Policy.....	5
1.1.1	Neath Port Talbot Local Development Plan.....	5
1.1.2	Existing conditions	5
1.1.3	Existing rights of way	7
2.	Proposed Development	7
2.1	Site Access	7
2.1.1	Western Section (Network Rail Land).....	7
2.1.2	Eastern Section.....	8
2.2	Programme and Phasing	9
2.3	Construction Working Area	12
2.4	Working Hours	12
3.	Construction Traffic Route	12
3.1	Local Highway Network.....	12
4.	Construction Vehicle Movements.....	13
4.1	Delivery of Materials.....	13
4.1.1	Deliveries to and from Construction Compounds	13
4.2	Labour Force Traffic.....	14
4.2.1	Traffic Flow Generation - Employee Traffic	14
4.3	Traffic increases during construction	15
4.4	Parking	15
4.5	Public Rights of Way	16
5.	Access to Recreational Facilities	16
6.	Mitigation Measures	16
6.1	General Mitigation Measures	16
7.	Summary	17
Appendix A.	Rights of Way, Map	20

Tables

Table 1-1 - Traffic count data (vehicles)	6
Table 2-1 - title	9
Table 4-1 Peak number of HGVs (including tipper trucks) generated.....	13
Table 4-2 Generated Daily Employee Vehicles.....	14



Table 4-3 - Traffic count data (vehicles)	15
---	----

Figures

Figure 1-1 - Traffic counter locations	6
Figure 2-1 - Site access - western section	8
Figure 2-2 - Site access - eastern section	9



1. Background

The Pantyrheol area in Briton Ferry frequently experiences flooding that affects both residential and commercial properties. These incidents occur due to the inadequate capacity of the existing Grandison Brook culvert. Neath Port Talbot Council (NPTC) is proposing to develop a flood alleviation scheme (the 'Scheme') to increase the drainage system's capacity and thereby reduce the risk of flooding from Grandison Brook.

AtkinsRéalis has been appointed by NPTC to prepare and submit an application for full planning permission to develop the Scheme. In broad terms the Scheme includes the installation of new larger culverts under the highway and through green/open spaces, some earthworks to control flood waters, and the installation of a buried surface water storage tank.

During pre-application consultation, and due to the potential for construction of the scheme to disrupt transport and accessibility within and through the local community, the local highway authority requested a Construction Traffic Management Plan (CTMP) be prepared. In summary, the Local Highway Authority asked for the following to be covered in the CTMP:

- Programming, phasing and location of construction activities.
- Construction traffic volumes/frequency
- Preliminary design of site accesses
- Parking and vehicle turning areas in compounds
- Road/lane closures and any public rights of way closures/diversions
- Mitigation to minimise impacts on pedestrian and vehicular access to the adjacent land uses.
- Measures to minimise the number of site operators' vehicles accessing/exiting sites and compounds

1.1 Planning Policy

1.1.1 Neath Port Talbot Local Development Plan

The Neath Port Talbot Local Development Plan (LDP), adopted in January 2016, outlines strategic planning and development management policies. **Policy TR2 – Design and Access of New Development** requires development proposals to ensure safe use of the highway network and not generate unacceptable traffic or safety issues.

1.1.2 Existing conditions

The site is located at Briton Ferry which is itself served by the A474 Pantyrheol Road. The A474 is the main route between the A48 to the south towards Baglan and Neath and the A465 (Heads of Valley Road) to the north.

Existing traffic data has been provided by Neath Port Talbot Council (NPTC) at the locations shown below in Figure 1-1 during the period 29 June to the 13 July 2023. Table 1-1 provides vehicle totals for 12-hour durations broadly coinciding with the planned working hours and peak hourly vehicle numbers for vehicles below and above 5m in lengths.



Table 1-1 - Traffic count data (vehicles)

Counter location	Total 12H (0700-1900)	Peak hourly vehicle Flow (2-way)	Peak hourly vehicle Flow (2-way) <5m long ¹	Peak hourly vehicle Flow (2-way) >5m long ²
Site 817	10,785	1,084	1,010	74
Site 1897	2,899	318	291	27
Site 1278	705	77	71	6

Table Notes:

- 1) Motorcycles = <2.5 metres, Cars = 2.5 - 5 metres
- 2) Vans = 5 - 7.5 metres, Minibus = 7.5 - 10 metres, Bus/Commercial van = 10 - 12.5 metres, Trucks/HGV = 12.5 - 15 metres

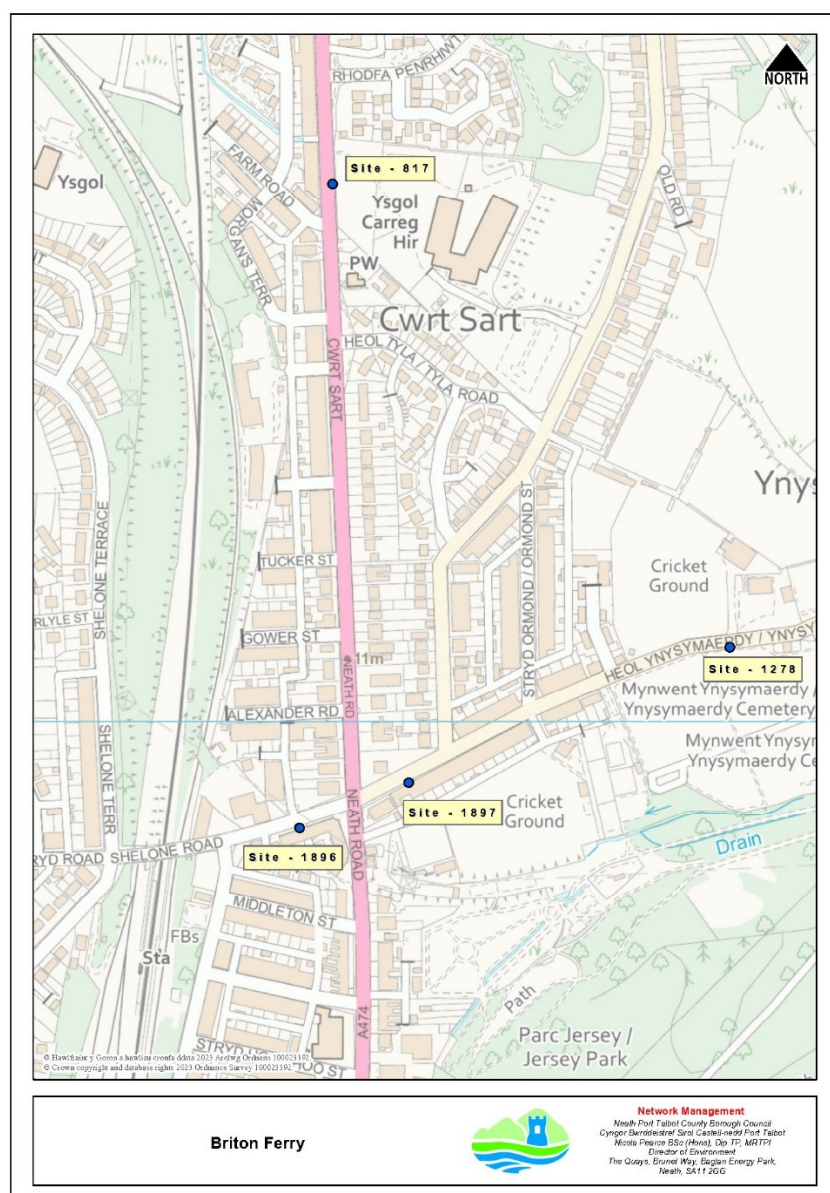


Figure 1-1 - Traffic counter locations

1.1.3 Existing rights of way

Two public rights of way affected are affected by the Scheme. Footpath 30/MO.ANB18/1 runs along a short section of 'The Incline' north of the inlet structure at the end of Ynysymaerdy Road and Footpath 37/MO.ANY1/1 runs along the northern edge of the rugby pitch and along the access to Llansawel AFC. These public rights of way are shown on the map in Appendix A.

2. Proposed Development

2.1 Site Access

The site is located at Briton Ferry which is itself served by the A474 Pantyrheol Road. The A474 is the main route between the A48 to the south towards Baglan and Neath and the A465 (Heads of Valley Road) to the north.

The site is effectively split into two sections because the mainline railway and the fenced off area of network rail land within Penrhiwtin is not routinely accessible to the public. This section to the west (see Figure 2-1) can only be accessed via a level crossing opposite Morgans Road. The remainder of the site i.e. the eastern section (see Figure 2-2) is accessible via the public highway network up to the point where site entrance points will be created to access off-road sections.

General arrangement drawings for the works are shown on drawings NE05_001-ATK-GEN-SWMWREC-DR-CD-000001 and NE05_001-ATK-GEN-SWMWREC-DR-CD-000002.

2.1.1 Western Section (Network Rail Land)

The main construction routes and off-road site access routes together with locations of the construction compound for works within the red-line boundary are shown in Figure 2-1.



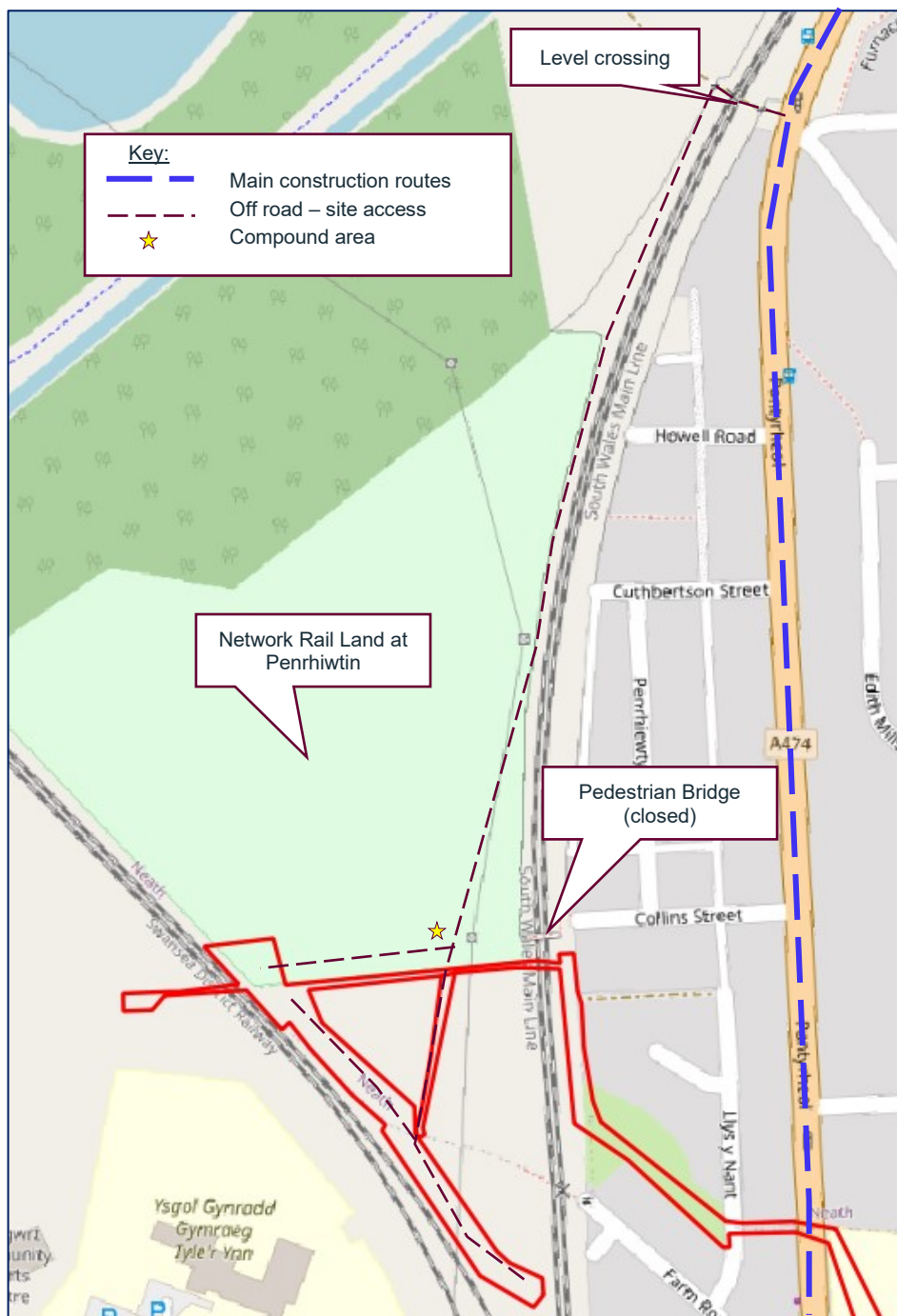


Figure 2-1 - Site access - western section

2.1.2 Eastern Section

The main construction routes and off-road site access routes together with locations for site compound areas for works within the red-line boundary are shown in Figure 2-2.

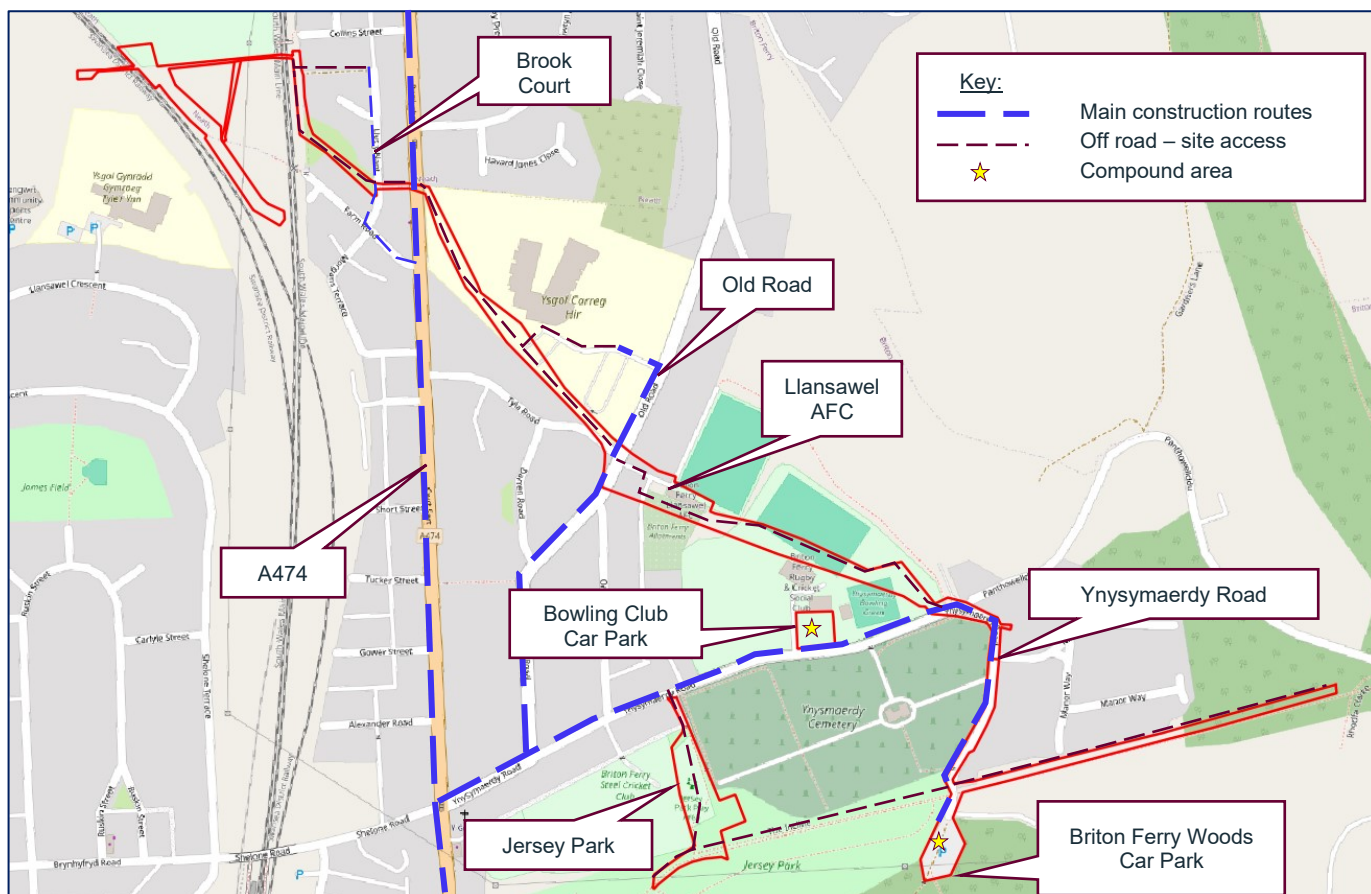


Figure 2-2 - Site access - eastern section

2.2 Programme and Phasing

To gain a realistic understanding of the construction requirements for this project, the project team consulted with a construction contractor during a phase of 'Early Contractor Involvement' (ECI). The ECI provided details on construction phasing, traffic management and programme timings.

A single contract will be in place which will carry out all of the following phases of work:

Table 2-1 - title

Phase	Months	Description
0	2 months prior to main contract start	<p>Advanced Works</p> <p>This comprises of trial pit excavations in several key areas to establish further information on buried services. Diversion of services will also be carried out by statutory undertakers for water, gas, electric and communications.</p> <p>The works will be carried out prior to the main contract commencement.</p>

		<p>The work would require small scale investigations at several locations of the site, which would be completed with localised traffic management consisting of partial road or footway closures consisting of a single lane of traffic. Works in each location would be short duration (typically 1 week at a time).</p>
1	1	<p>Site Establishment</p> <p>For the eastern section of works, two construction compounds are proposed to minimise the number of journeys required during construction. One site will be located near the eastern end of Ynysymaerdy Road at the Briton Ferry Woods car park and, if agreement is gained, at the Bowling Club/Rugby Club which is approximately halfway along Ynysymaerdy Road. Access to the site compound would be from Ynysymaerdy Road in both instances. No works are anticipated to be necessary to improve the access to these site compounds, but warning signage will be required to point out that the access is being used by construction vehicles. At the Bowling Club, signage to divert pedestrians onto the opposite footway will improve safety.</p> <p>At the Briton Ferry Woods car park, spaces for parking would be temporarily lost to the public. There will also be a need to provide a segregated pedestrian access path to allow access to the woods.</p> <p>A further construction compound with separate site welfare facility will be located at Penrhiwtin within an area of land owned by Network Rail. Access to this location requires crossing of the level crossing at A474 Pantyrheol Road. By setting up a site compound and welfare facility to the west of the railway line, the number of trips over the level crossing will be reduced. No access improvements are required on the public highway. Within the area of land owned by Network Rail a haul road will be created. There is no public access within this area of land, but there is a Dŵr Cymru Welsh Water (DCWW) sewage treatment works and one small landholding/stable which also uses the level crossing for access.</p> <p>Further consideration is also being given to opening the pedestrian rail bridge at Collins Street to construction operatives only. This will further reduce the number of vehicle movements over the level crossing.</p>
2	1-6	<p>Utility Diversions</p> <p>The principal utility diversions are at Ynysymaerdy Road/Pant Howell Ddu Road junction. In this location there will be a need for temporary traffic lights to form 3-way working at the junction, to allow single lane traffic operation.</p>
3a	4-7	<p>Works on Network Rail land</p> <p>Works to construction a new earthworks flood bund, a concrete flood wall and ditch clearance will all take place within an area totally enclosed between the mainline railway (Swansea-London) and the freight line further west.</p>

		The main impact on traffic will be from construction traffic entering and exiting the A 474 Pantyrheol road near the junction of Westbourne Road and Morgans Road.
3b	4-7	<p>Brook Court</p> <p>Construction traffic will be required to access Brook Court via Farm Road. The construction of a new culvert crossing under Brook Court will necessitate full closure of the road for up to 2 weeks and partial closures at other periods. Local traffic will be diverted via Collins Street during full road closures.</p> <p>Access off Brook Court to land either side of the road is required for the culvert construction. This will require the construction of temporary vehicle access points.</p>
4a	7-9	<p>A474 Pantyrheol Road</p> <p>The new culvert will be required to be installed across the A474 road and partial closure of the road to single way working under traffic lights will be necessary. The works are also in close proximity to a bus stop which may need to be relocated temporarily. The pedestrian access to Carreg Hir school may also have to be closed temporarily whilst the works are in proximity and alternative safe access, using the school main entrance would be used.</p>
4b	7-9	<p>Carreg Hir School and the playing fields</p> <p>Works within the school are proposed for the summer holiday period. Construction traffic will use the school entrance off Old Road to access all works within the school perimeter.</p> <p>Access to the works in the playing fields will be either from the west via the existing access road to Llansawel AFC or from the east via Ynysymaerdy Road. Access improvements will be needed at Ynysymaerdy Road to provide a temporary vehicle access to the works where there is currently no road access. The access will consist of stone material at its junction to prevent mud on the road. Pedestrian signage will be in place to direct pedestrians to the opposite footway to minimise conflict with construction vehicles.</p>
4c	7-9	<p>Jersey Park</p> <p>An existing access off Ynysymaerdy Road to the play area will be utilised to access the works area in Jersey Park. The play area will need to be closed for the entirety of the works. It should also be noted that pedestrian access to Ynysymaerdy Road from the park will not be possible during the works. Pedestrian signage will be in place to direct pedestrians along alternative routes to access Jersey Park.</p> <p>There is also a smaller access to Jersey Park adjacent to Briton Ferry Woods car park which may be used for smaller vehicles.</p> <p>Careful consideration of pedestrian signage and closure of parts of the park will be required.</p>
4d	9	<p>Crossing of Old Road</p> <p>The new culvert crosses the junction of Old Road/Tyla Road and is in proximity to the access road to Llansawel AFC. There will be a need for</p>

		the road to be under 3-way traffic light control to allow parts of the road to be closed for working.
5	8-11	Ynysymaerdy Road Works to install a new culvert in the road would normally require closure of the road, but as there is no suitable diversion available it will require careful management of road space as much of the road will be taken up with the construction work area. Consultation with residents will be undertaken to give advanced warning of temporary reduction in on-street parking and the potential need to temporarily move refuse collection points. As part of the consultation consideration will be given to special provisions to mitigate the impact of traffic management on anyone with limited mobility or health frailties. Works would progress on a rolling programme so that as much access as practicable is given during the works.
6	9-12	Remedial works The existing culvert system will be cleaned and repaired at the conclusion of the works. Access created for the new culvert works or existing accesses will be used, this will include the school entrance at Carreg Hir (off Old Road), the entrance to Llansawel AFC and the temporary access off Ynysymaerdy Road.

Construction activities within the school will be programmed to suit school holiday periods to avoid conflict with pedestrians and higher volumes of traffic.

The phasing of construction will ensure the associated traffic management measures are also phased to limit their impact of the Scheme on the operation of the local highway network and to limit the impact on pedestrians.

2.3 Construction Working Area

2.4 Working Hours

In order for the scheme to be completed in the shortest time possible, working hours will be from Monday to Friday 0700 to 1800 and Saturday between 0800 and 1600. There will be no work over Christmas, New Year and Easter public holiday and Bank Holidays.

3. Construction Traffic Route

3.1 Local Highway Network

The use of separate compound locations will minimise the effects of construction traffic on the local road network.

The busiest part of the highway network is the A474 Pantyrheol Road and it is acknowledged that the A474 cannot be fully closed, albeit lane closure and traffic light working will be required. Key junctions are also affected such as



those at Old Road and Tyla Way which will require 3-way traffic light working. Similarly the junction of Ynysymaerdy Road and Pant Howell Ddu road will also require 3-way traffic control for a period.

The residents most affected by access due to the works are those in Ynysymaerdy Road and Brook Court due to the working space required for underground construction of the proposed culverts. This will require coordination and cooperation between the contractor and residents with clear plans put in place by the contractor.

4. Construction Vehicle Movements

4.1 Delivery of Materials

4.1.1 Deliveries to and from Construction Compounds

Deliveries of larger loads of materials (for example the pipes used for the new culvert) will primarily be delivered to the site compound locations via the A474 and then along Ynysymaerdy Road. These larger loads will then be split down into small deliveries for handling with smaller vehicles. Deliveries will take place between the working hours stated in 2.4 above.

The majority of bulk soil material import is required for the construction of a flood bund on the Network Rail owned land. These materials will be delivered straight to the works location rather than being delivered to site compounds. Smaller quantities of imported soils, stone and concrete to surround the proposed culvert will also be direct to the works locations, rather than site compound locations.

The time periods for deliveries of materials are on the basis of discussions with the internal design team and information within the scheme programme. The following assumptions have been made:

- The size of delivery vehicles for bulk soil import will be in the order of 20 tonne type tipper trucks;
- Larger loads of materials, such as pipes will use HGVs;
- An assessment of daily peak usage has been made.

Vehicle movement timescales for delivery of materials for each element of the scheme are detailed in Table 4-1. In order to deliver large items of plant or equipment, occasional HGV movements will be required. The delivery of any large items of plant or equipment requiring a low-loader will be undertaken outside peak hours to minimise traffic disruption.

The following tables detail the peak construction vehicle movements by construction phase relating to the delivery of construction materials.

Table 4-1 Peak number of HGVs (including tipper trucks) generated

Sub-Phase	Number of HGVs Per Day	Number of HGVs Per Hour	Total 2-way movements per hour
Setting-Up Site - Plant Delivery	2	1	2



Material deliveries, pipes and other materials (excluding bulk soils)	2	1	2
Construction of haul roads on Network Rail land at Penrhiwtin	10	1	2
Construction of bund on Network Rail land at Penrhiwtin	10	1	2
Closing down site - plant removal	2	1	2

4.2 Labour Force Traffic

4.2.1 Traffic Flow Generation - Employee Traffic

Employee traffic is assumed to arrive in the AM peak and depart in the PM peak. In addition, specialist contractors will probably arrive by van accompanied by co-workers and there may be some individual car journeys made by the site foreman and client's site supervision team.

It is assumed that there may be approximately 20 employees on site each day and Table 4-2 illustrates the total number of employee vehicles generated, that being an estimated 17 vehicles per day.

Table 4-2 Generated Daily Employee Vehicles

Employee Type	Employees Per Vehicle	Number of Vehicles (per day)	Number of Employees
Contract Manager/Foreman/Quantity Surveyors	1	5	5
Specialist Sub-contractor	1	4	4
Client's site supervision team	1	2	2
Labourers/Plant Operators	8	2	16
Total		13	27



4.3 Traffic increases during construction

Changes in peak hourly flows as a result of the planned works, taking account of the HGVs and labour force traffic is shown below. This assessment assumes that the peak of the HGV vehicles activities (2no. 2-way vehicle movements) and all the labour force traffic (13 vehicles) occurs during the peak hourly flow.

Table 4-3 - Traffic count data (vehicles)

Counter location	Baseline Peak hourly vehicle Flow (2-way)	Construction Peak hourly vehicle Flow (2-way)	% increase
Site 817 (A474)	1,084	1,099	1.4
Site 1897 (Ynysymaerdy Road – near A474)	318	333	4.7
Site 1278 (Ynysymaerdy Road – near Cemetery)	77	92	19.5

The table above illustrates that the increase in traffic on the A474 is small resulting in a **minor adverse** impact on traffic flow and on amenity. Near the cemetery on Ynysymaerdy Road the increase in traffic is more significant. This will cause disruption to traffic flows and amenity in this location and, without mitigation, is likely to have a **significant** impact

4.4 Parking

With the exception of the eastern end of Ynysymaerdy Road, the planned works are not anticipated to impact parking as the works are within off-road locations. Construction vehicles and employee vehicles will use site compound areas for off-street parking.

During construction of the Scheme along Ynysymaerdy Road there will be a temporary need to remove on-street parking. This is mitigated to some extent by private parking on driveways or there will be a need for homeowners and visitors to park further west at a distance up to 200m away.

During construction of the Scheme, the Briton Ferry Woods car park off Ynysymaerdy Road will be used as a construction compound so will not be available for parking. During this time users of the car park will be required to park on-street either on Ynysymaerdy Road or on Manor Way. Once construction is complete the compound will be removed and the car park will reopen.

During construction of the Scheme, the Ynysymaerdy Bowling Green car park may be used as a construction compound so will not be available for parking. During this time users of the car park will be required to park on-street on Ynysymaerdy Road. Once construction is complete the compound will be removed and the car park will reopen.

Construction of part of the new culvert will require the temporary removal of a small proportion of car parking spaces at Ysgol Carreg Hir. The works in this location will take place during the school holidays to avoid disruption to the school. The spaces will be resurfaced and re-instated once the section of the Scheme through the school grounds has been completed.



4.5 Public Rights of Way

It is likely that Footpath 30/MO.ANB18/1 would need to be closed temporarily during works proposed alongside the footpath which include raising the height of the bank and construction of a new inlet structure. Users of this footpath will be diverted along Manor Wy for approximately 300m.

A small section of the southern end of Footpath 37/MO.ANY1/1 would need to be temporarily closed during the replacement of the culvert in that location. An alternative route which forms part of Footpath 37/MO.ANY1/1 is available in this location and thus no diversion will be necessary.

Construction will be programmed to minimise the duration of temporary footpath closures/diversions and using temporary fencing and signage to maintain safe access for footpath users.

Once construction is complete users should see improvements to the local PRoW network at this location due to decreased flood risk. The resurfacing of the currently poorly surfaced access route to Llansawel AFC will have a positive effect by enhancing access along footpath 37/MO.ANY1/1 and improve access to the football club.

5. Access to Recreational Facilities

The access to Jersey Park from Ynysmaerdy Road would need to be closed to the public for approximately 3-4 months to enable the buried storage tank to be constructed. During construction, users of the access will be able to access Jersey Park via alternative access points which will remain open.

A new section of watercourse is proposed in Jersey Park to convey water to the proposed buried storage tank. This will require the footpath on the adjacent Ynysmaerdy Incline to be raised slightly. A temporary closure of this route would be required to raise the footpath. Alternative access routes through the park will be available. Once the Scheme is complete the reprofiled path will be open for use.

The footprint of the proposed construction compound at Briton Ferry Woods would be arranged to ensure safe pedestrian access to Briton Ferry Woods via Ynysmaerdy Road is maintained during construction of the Scheme.

6. Mitigation Measures

6.1 General Mitigation Measures

Occasional weekend working may be included in the construction programme to minimise the duration of construction period, or to assist in deliveries of large equipment or construction items outside of peak traffic hours. Construction will also be phased to minimise any adverse effects during peak seasons for recreational facilities.

The works on public highways will be managed in accordance with the requirements of Neath Port Talbot Council. (as Highway Authority) The Contractor shall be responsible for establishing and following all of Council's restrictions, requirements and procedures relating to traffic management and temporary traffic orders.

The following requirements will apply to the construction works at all times:

- The contractor shall not commence any work that affects the public highway until all traffic safety measures necessitated by the work are fully approved by the Highway Authority and are operational.



- The contractor shall keep clean and legible, at all times, all traffic signs, road markings, lamps, barriers, and traffic control signals, and shall position, replace, reposition, cover or remove them as required by the progress of the works;
- Where any Public Rights-of-Way cross any site where work is being carried out, safe crossing points including appropriate signs and signals shall be approved in writing by the local highway authority;
- All pedestrian routes diverted onto the carriageway will be clearly defined by continuous barriers, constructed to the requirements of the local highway authority;
- All trees (unless they are to be removed/lopped) and other features near the construction works shall be carefully protected in accordance with the tree protection plan; any damage caused by the Contractor shall be made good within an agreed timetable to the complete satisfaction of the Local Authority;
- The contractor shall agree with the local highway Authority the number of lanes to be maintained on- and off-peak on the roads affected by the works;
- Areas / locations of parking provision for construction vehicles shall be agreed with the local highway authority prior to commencement of the works;
- The contractor shall provide facilities and systems for mitigating the effects of dust caused by the construction works. These shall typically include using water bowsers during dry and windy conditions to dampen material stockpiles and unsurfaced areas; restricting site vehicle speeds; and using road sweepers at access points and paved areas.
- So far as reasonably practicable, all parts of the public highway, including drainage systems will, at all times, be kept free from mud and other loose materials arising from the works.
- The contractor shall comply with the Local Authorities' environmental policies relating to road works and waste management.
- The contractor shall take all reasonable precautions to prevent or reduce any disturbance or inconvenience to the owners, tenants, or occupiers of adjacent properties, and to the public generally. The owners, tenants, and occupiers of affected properties shall be informed of the works to be undertaken, their planned duration, roads and access closures, and alternative access routes (where required) in writing and by locally posted public notices at least two weeks prior to work starting, unless formal notices take precedence.

7. Summary

This Construction Traffic Management Plan (CTMP) outlines the overall arrangements for managing the movement of traffic required to construct the Scheme as well as considering the amount of traffic the Scheme will generate.

This CTMP also details the programming, phasing and location of the work activities and highlights what the impacts on traffic and access would be. The CTMP highlights that by having different compound locations the number and length of trips across the overall site can be reduced. Phasing of the works is also put in place so that sections of work can be completed to reduce the level and duration of disruption to localised areas at any one time. Works at Carreg Hir school are targeted for the summer holiday period, so as not to impact pupils.

Impacts on traffic volumes from the construction phase traffic, results in a peak increase in traffic of only 1.4% on main roads (A474) but this is much more significant at Ynysmaerdy Road, particularly at its most eastern extent.

Consultation with residents at Ynysmaerdy Road will be undertaken to give advanced warning of the temporary reduction in on-street parking and the potential need to temporarily move refuse collection points. As part of the consultation consideration will be given to special provisions to mitigate the impact of traffic management on anyone with limited mobility or health frailties. Works would progress on a rolling programme so that as much access as practicable is given during the works.



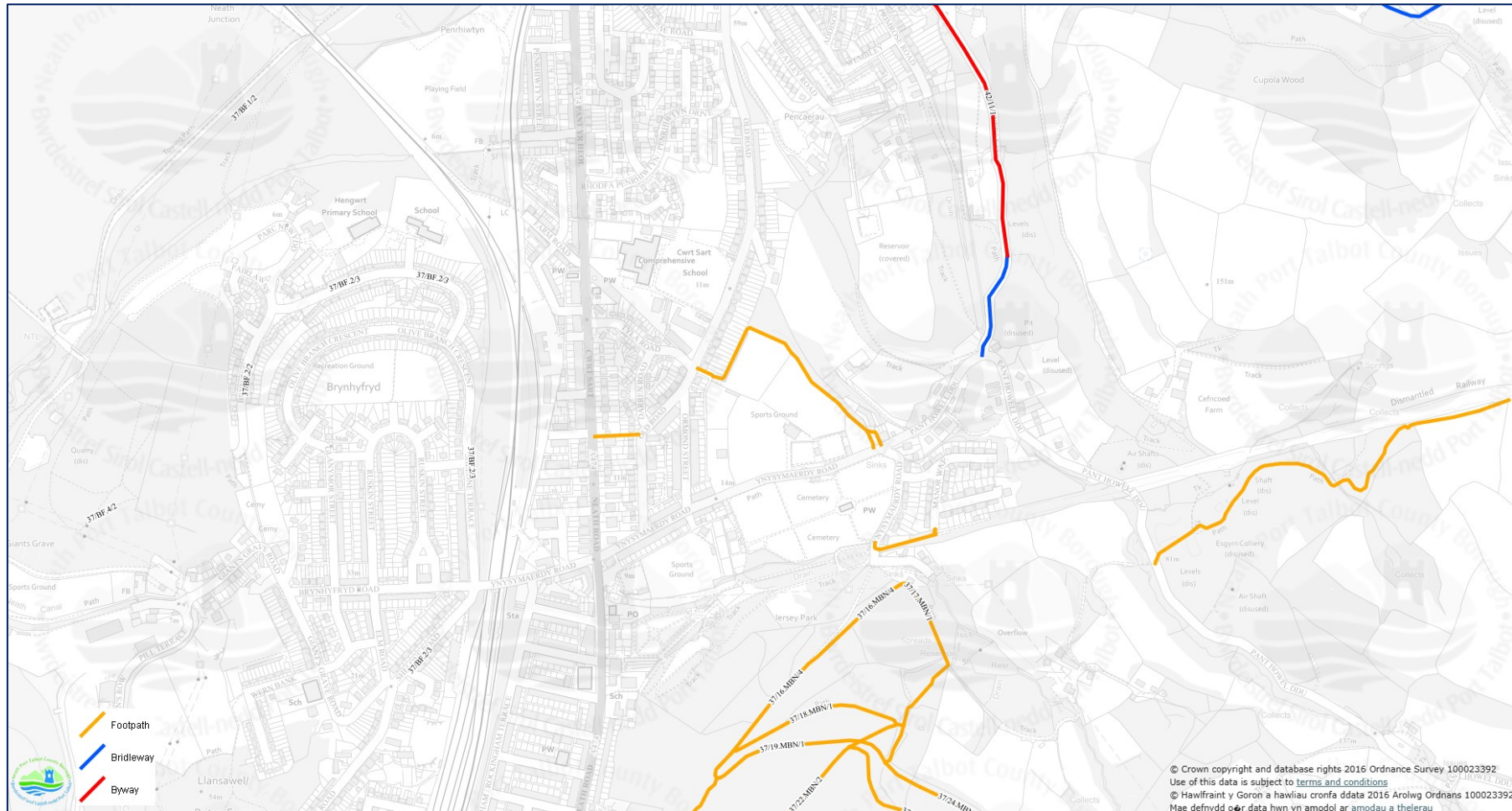
The CTMP sets out a variety of specific mitigation measures that will be implemented during construction that will minimise the impact of the construction traffic on the environment and community; these include: Liaison with the Highway Authority to agree traffic measures to be undertaken; taking precautions to reduce disturbance or inconvenience to affected properties by considering activity timings and durations; site security and signage; and, measures to control nuisance such as emissions of dust and spreading of mud.

The mitigations within the CTMP will form contractual conditions within the works contract, setting out how the contractor would operate during the whole construction period .



APPENDICES

Appendix A. Rights of Way, Map



AtkinsRéalis



AtkinsRéalis UK Limited

West Glamorgan House
12 Orchard Street
Swansea
SA1 5AD

Tel: +44 (0)1792 641172

Fax: +44 (0)1792 472019

© AtkinsRéalis UK Limited except where stated otherwise