

# Windborne Gateway Interchange 2017

Technical Document

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PKC Group

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# Windborne Gateway Interchange Technical 2017

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# Windborne Gateway Interchange Technical 2017

## Introduction

The concept of the Windborne Gateway Interchange (WBG) is to provide a multipurpose facility for The Cefn, Cefn Mawr and the Aqueduct at the center of the Pontcysyllte World Heritage Site while simultaneously achieving goals of the Welsh Assembly Government (WAG) in both the national Planning Policy for Wales (PPW) and the Future Generations Act 2015, (FGA 2015). WBG combined with Jessop's Tramway is simply the most efficient and cost effective way of joining the centre of Cefn Mawr to the Pontcysyllte Aqueduct. This will enable and encourage people visiting the aqueduct to also explore the wider area of the Cefn & Cefn Mawr including the traditional centre of Cefn Mawr, Crane Street and Well Street. This will assist in the turnaround of the Cefn economy, from post industrial to tourism based.

WBG can and will do this in the following ways:

1. WBG will help enable the Cefn economy to move from depressed post industrial to Sustainable Tourism Development
2. WBG will help encourage people to explore the wider area of the Cefn & Cefn Mawr rather than "*Moving On*"
3. WBG will help correct the "*limited dwell*" time for which the aqueduct is currently criticized
4. WBG will address the "*Lack of facilities*" at the aqueduct by linking in with Cefn Mawr
5. This will remove the "*perceived need*" for new build at the aqueduct in unfair competition to other businesses in the Cefn & Cefn Mawr
6. This will help preserve the aqueduct in its natural setting, rather than surrounding it with new build for commercial gain
7. WBG will reuse a suitable Brownfield site, negating the need for new build and reducing further unnecessary CO2 emission
8. This will save a Greenfield site being lost at the Trevor Basin and more unnecessary CO2 emissions
9. WBG will provide a direct interchange facility to get people out of cars and into more environmentally friendly forms of transport
10. WBG will promote walking, cycling and horse drawn hackney carriage services as opposed the internal combustion engine
11. This will reduce CO, NOx and Palladium emissions and comply with WAG SDC aspirations for tourist management
12. WBG will reduce traffic congestion at the Trevor Basin which becomes problematic at the high season
13. WBG will reduce traffic congestion in Trevor while providing far larger capacity in a central location
14. WBG will reduce the detrimental traffic flow across the Cysyllte Bridge, a Grade 1 listed structure
15. WBG will negated the need for traffic flow through a residential area reducing noise and air pollution in our community
16. WBG will stop a children's play area from being exposed to raised levels of CO, NOx and Palladium emission (and exposure of our children)
17. WBG will provide a central location at the Cefn, the second largest community in Wrexham County for a local monthly market
18. This will further redress the economic hardship of the Cefn & Cefn Mawr while promoting the sales of local produce by local people
19. This will promote further sustainable retail growth within the community of Cefn & Cefn Mawr in compliance with WAG WPP & LDP2 by WCBC
20. WBG can provide an open air venue for events that promote the Welsh Culture and Language on the Borders in NE Wales.

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## WBG Central Parking



Windborne Gate Parking is central to the whole area.



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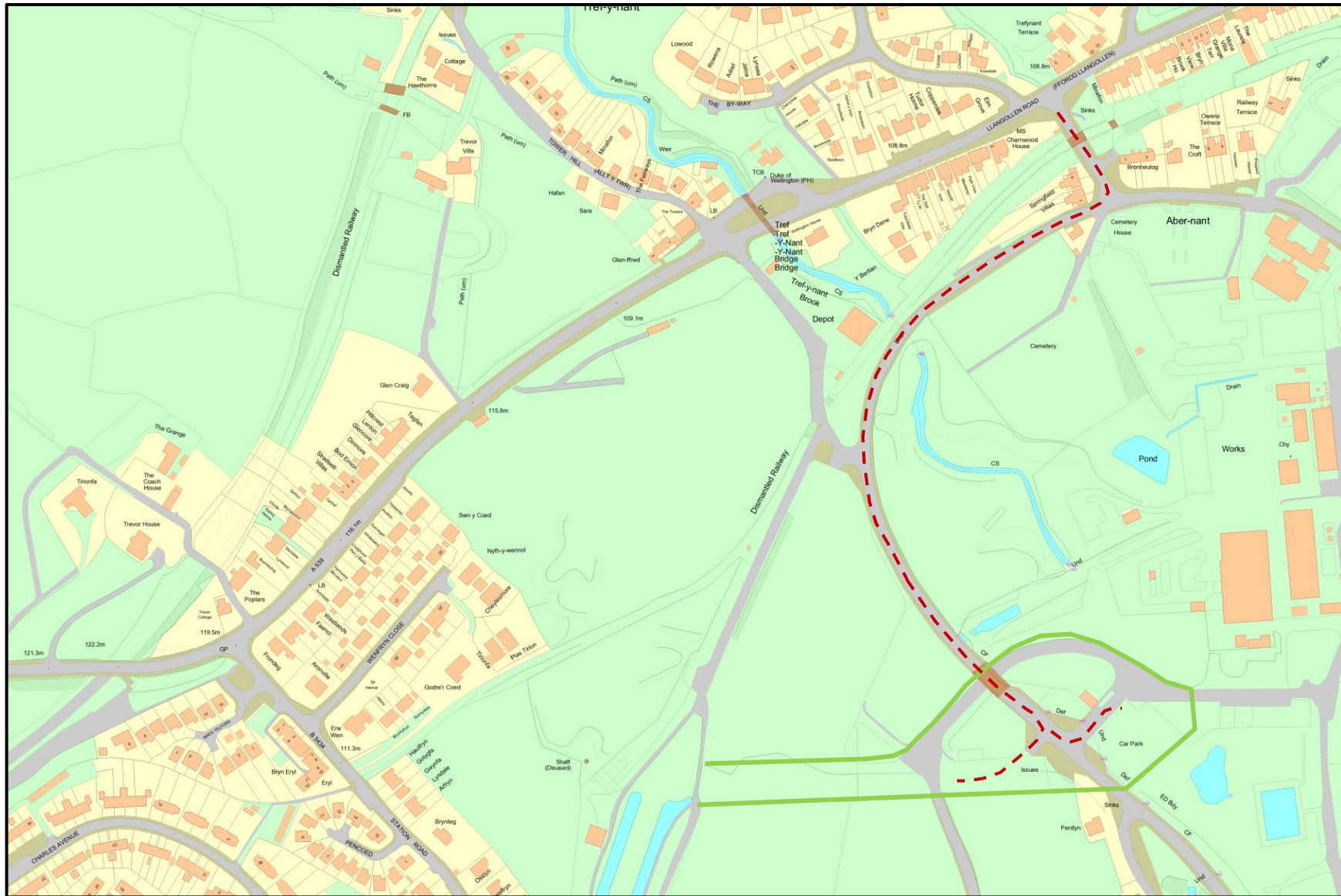
## WBG Access

Windborne Gate can be accessed directly from the A539 without having to negotiate a residential area and would minimise the current problems associated with parking at the Trevor Basin for both tourists and residents alike. Also there is a relatively easy driving route from the Windborne Gate Parking Area to both the Trevor Basin Car Park for DDA provision and Ty-Mawr Country Park which would work well and complement each other.

Please note the Windborne Gate Parking Area can be accessed from 5 separate directions which is more than Reeds Yard and Trevor Basin parking lots combined. Therefore Windborne Gate will simply provide a more than adequate facility at a minimal cost that is central to the Cefn and will help radiate the tourism trade around the whole area while minimising the current problems associated with the Trevor Basin.



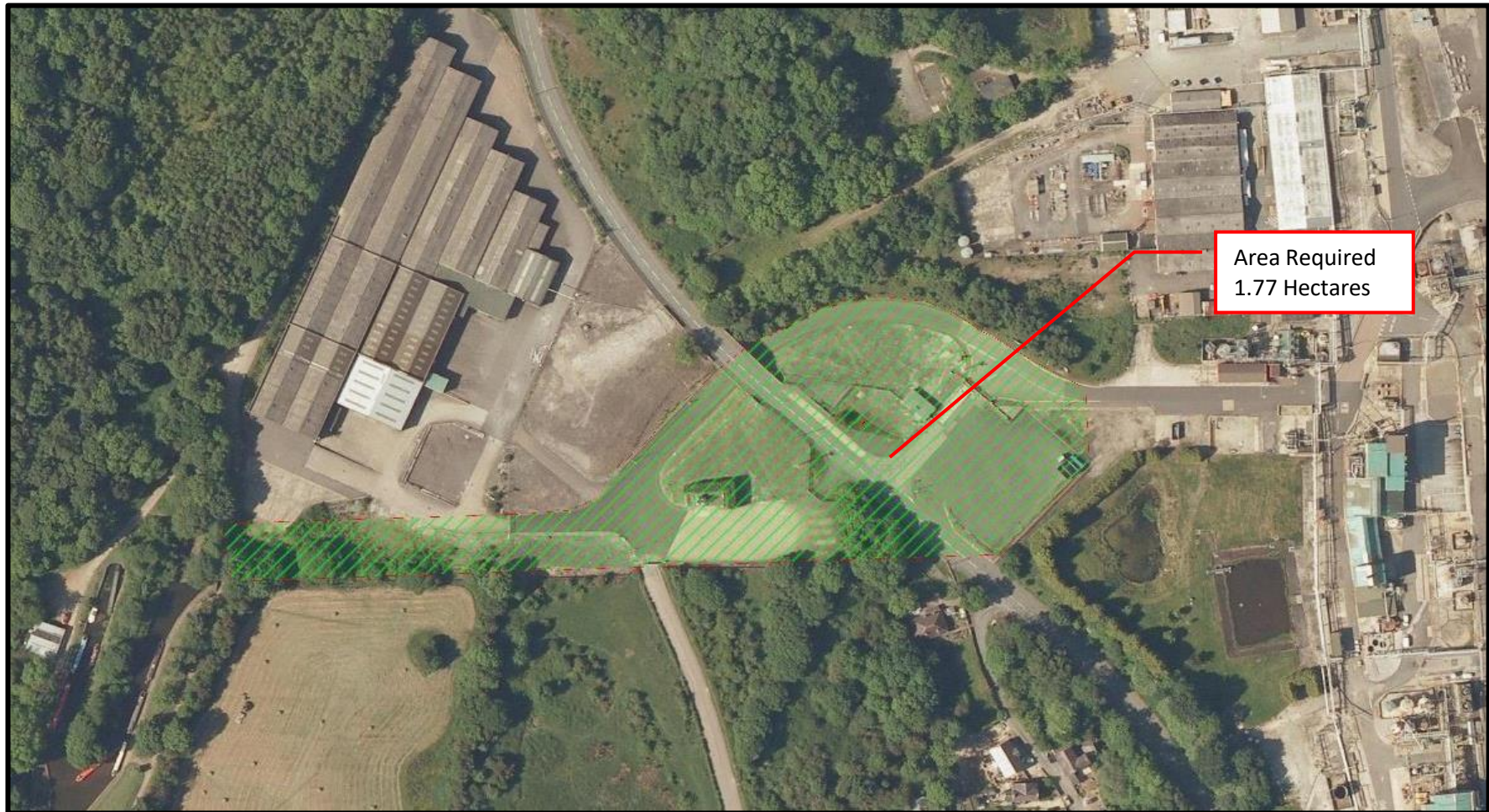
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## Windborne Gate Area



The suggested area is approximately 1.77 hectares most of which just needs weeding. The fencing can be moved at a moderate cost and tree screen planted. This would give direct access to both Trevor Basin and the Pontcysyllte Aqueduct. This parking lot is also accessed without having to drive through a residential area, and if it needs to be increased in size, this is not a problem.



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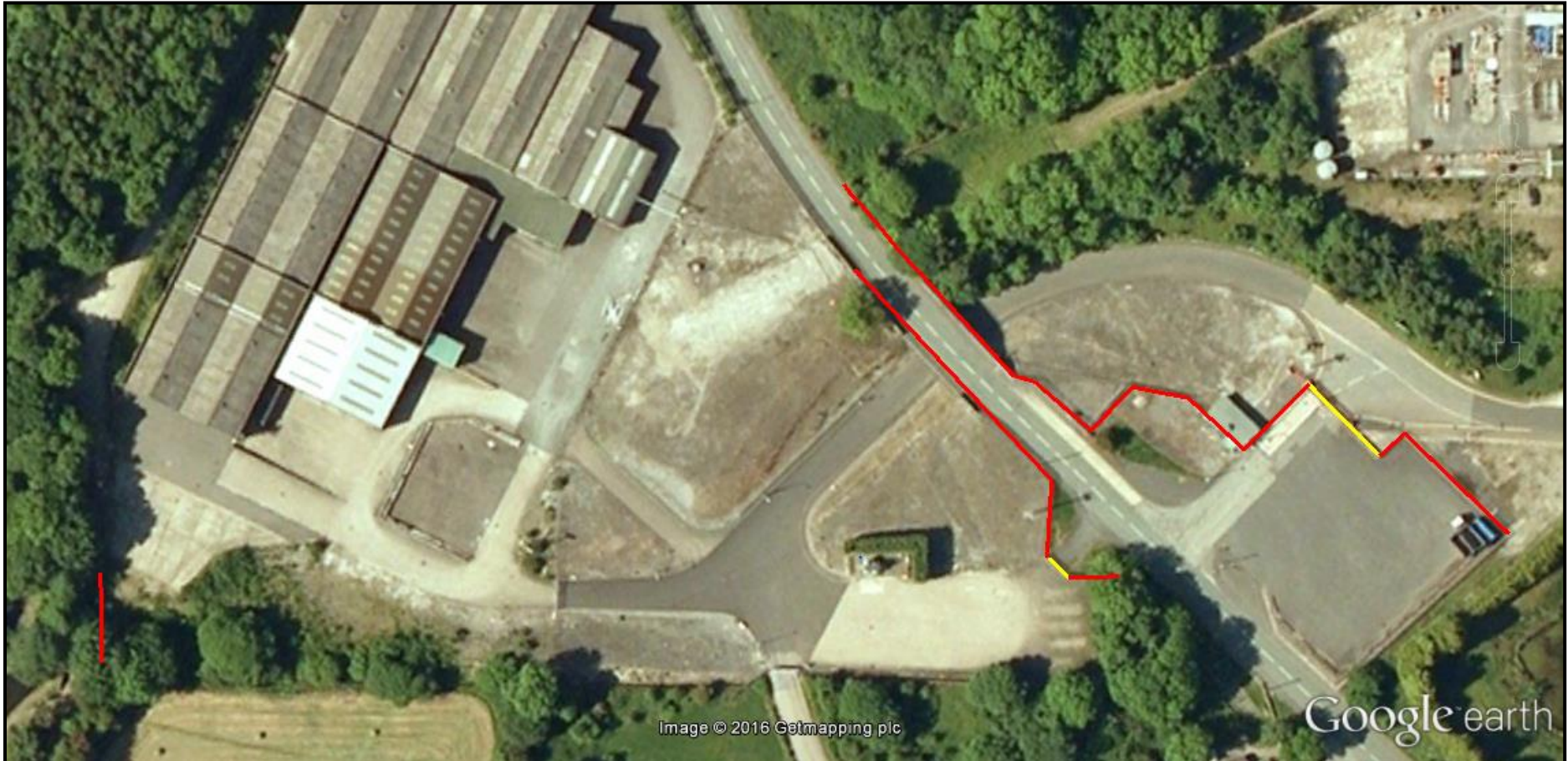
Consider this, with direct access from the WBG parking area to the aqueduct this will encourage a lot more people to use this parking area. Furthermore these people will also be encouraged to visit the wider area of the Cefn rather than just walk over the aqueduct and then move on. This short duration of stay is the current trend and one that the aqueduct is criticized for. By centralizing the parking Cefn Mawr Village center can provide what is perceived as lacking at the aqueduct without having to build new. On an environmental basis, by reusing the WBG as proposed here this will save the pristine field next to the current parking lot which has been proposed (WCBC & CRT 2014) for a car park extension. Therefore this proposal by the PKC Group helps save a Greenfield site by reusing a Brownfield site. This makes sense both environmentally and economically and will help to promote tourism in Cefn Mawr at the center of the World Heritage Site on a sustainable basis for generations to come.



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Ground Works

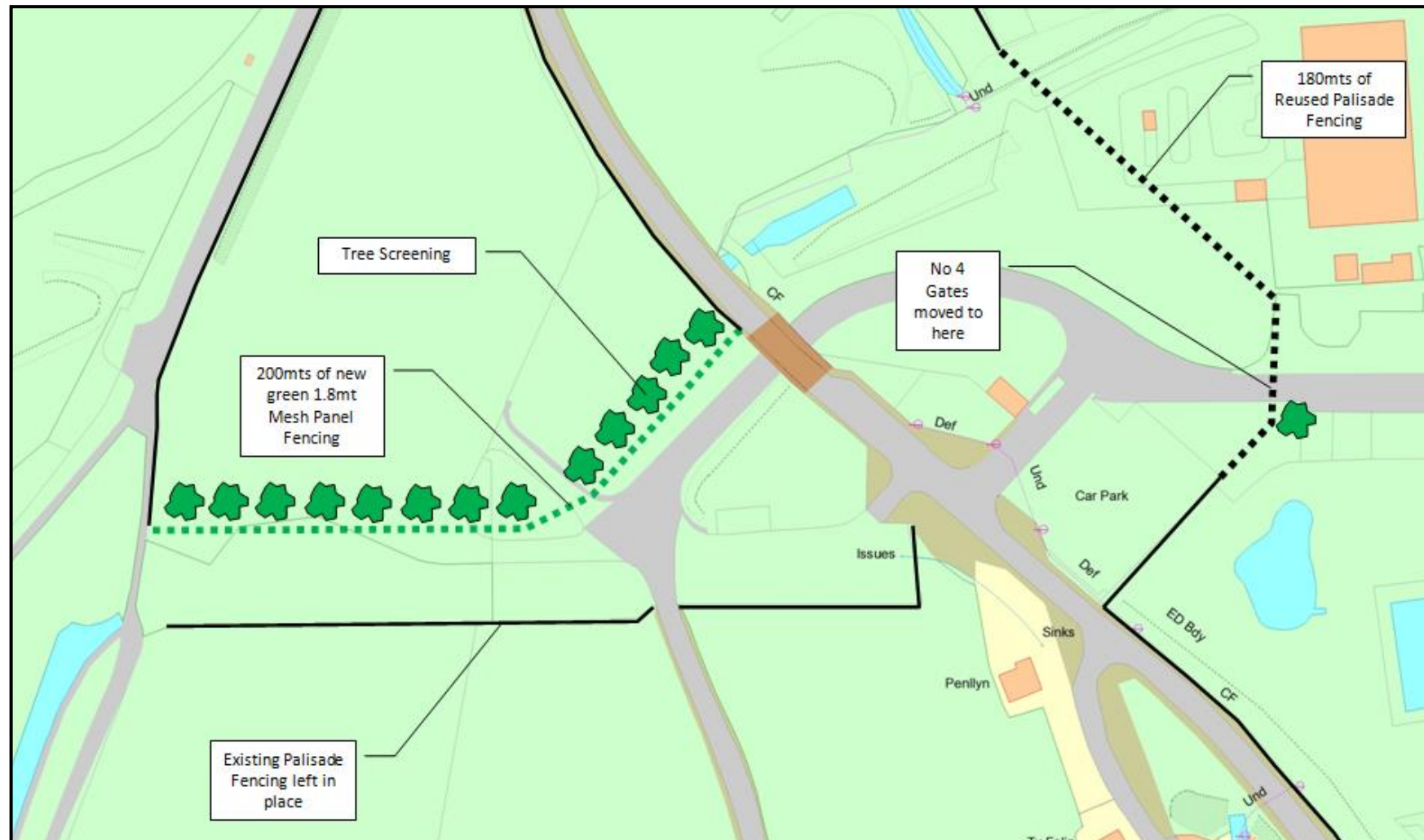
Fencing Removal



Removal of redundant palisade fencing (red) 300mts and gates (yellow) x 2 will help improve the area.

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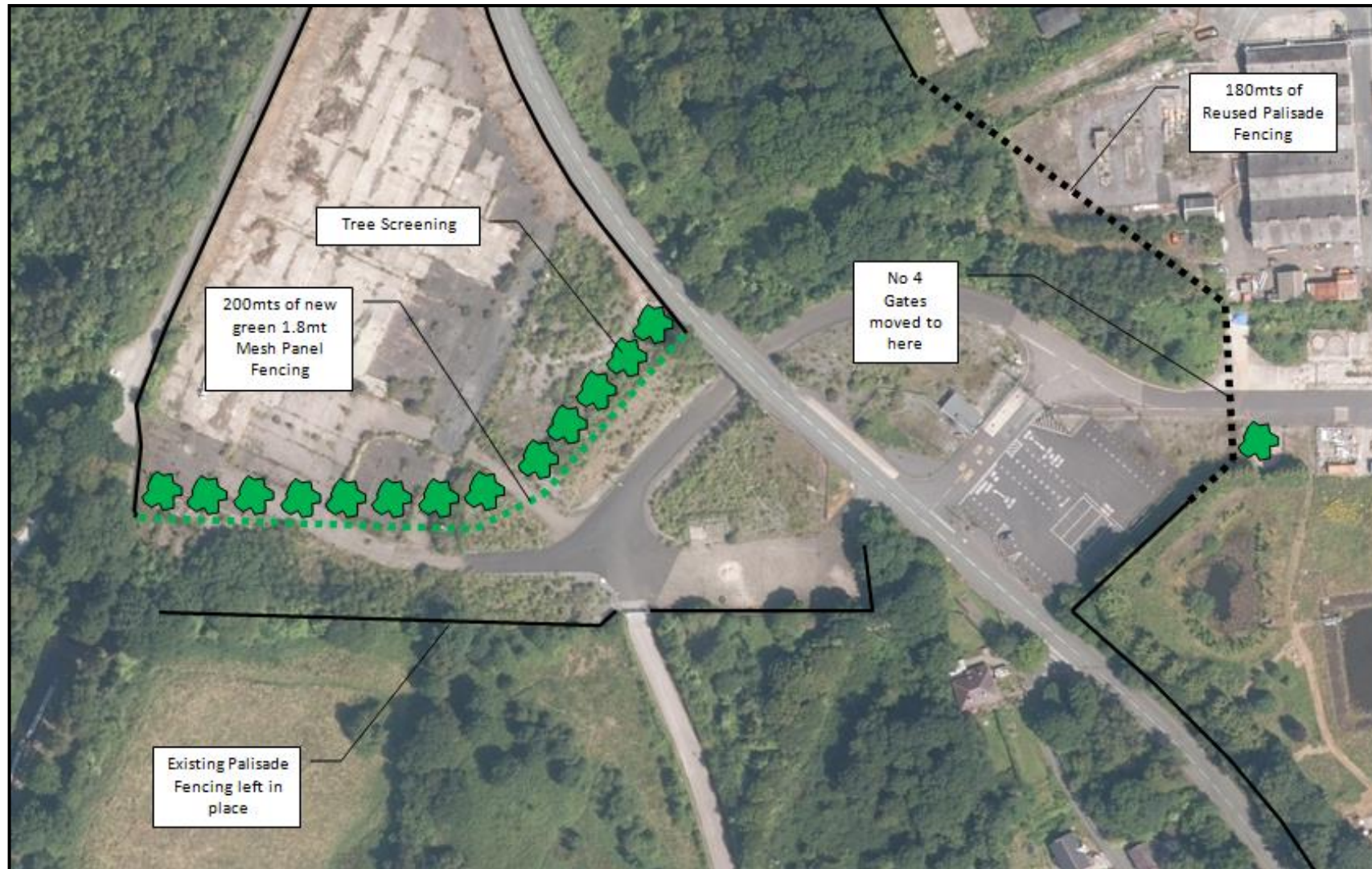
## New / Reused Fencing



Note reused palisade fencing taken to the north to tie in with existing fencing line and most suitable elevations used.



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Solid black lines show existing palisade fencing in place, dashed lines show recycled fencing, and green dashed lines show new mesh.



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1.8mt palisade fencing to remove and reuse at site, moving & reusing this fencing will directly improve the appearance of the area which currently resembles a prison camp because of all the unnecessary fencing left in place. In the case the new fencing line will run behind the line of trees in the right half of the picture. The only evident section left in this view would be the section across the road way leading into what was the Monsanto Works before demolition. This is where recycled / reused gates will be installed.



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Ugly 1.8mt palisade fencing and No 11 gate for removal and reuse in less conspicuous area. This fencing will be unnecessary and the removal of this will vastly improve the appearance of the area which will only help in the overall program of promoting tourism for the Cefn and the aqueduct. Unfortunately there is a lot of this unsightly and unnecessary fencing around the area that needs removing. However it can be reused in more appropriate locations that will help promote our community rather than being a barrier to it, and this is not limited to the ex-Monsanto Works.

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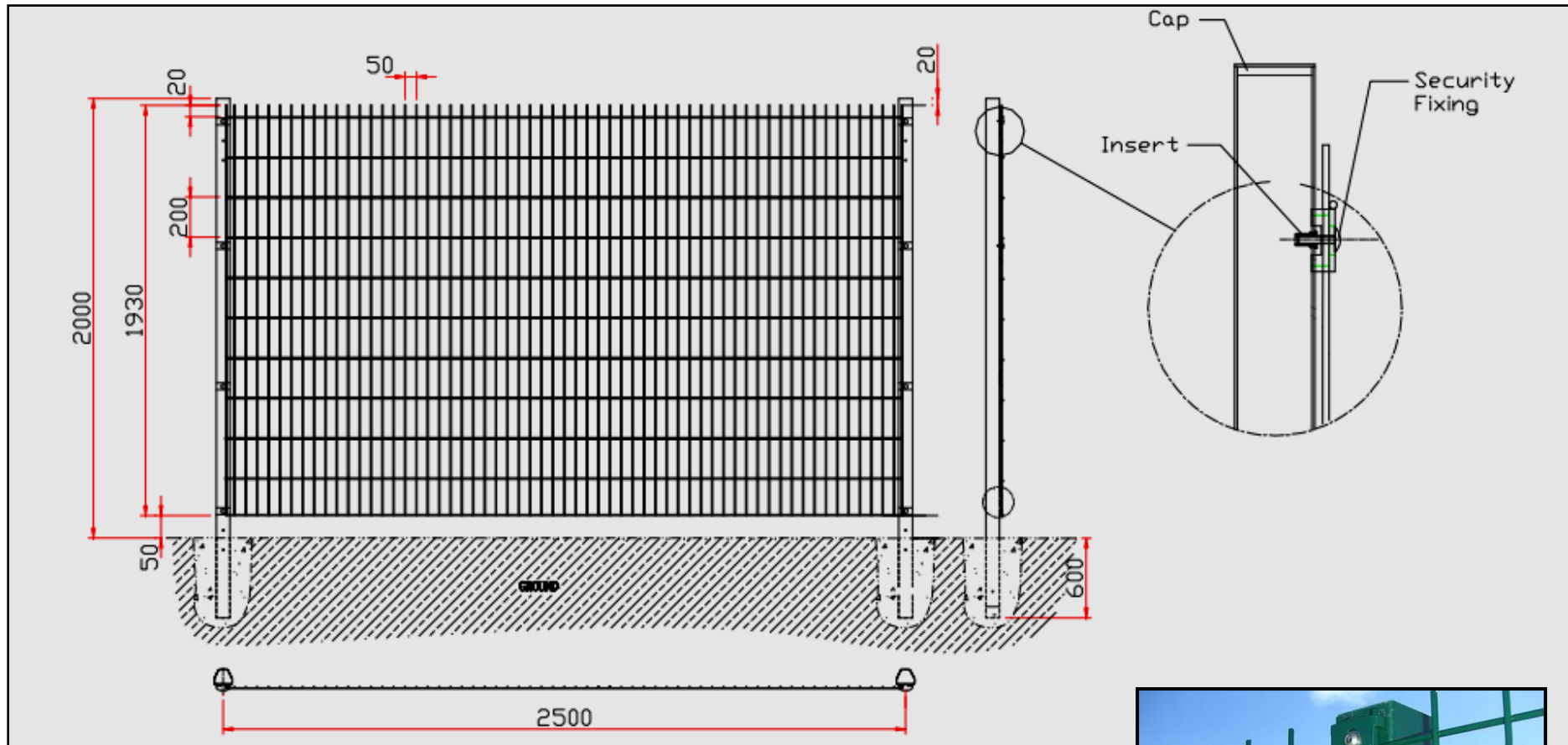
## New Fencing



It is planned to use new Green Wire Mesh Panel Powder Coated Fencing similar to that used already on the Eastman's site since final demolition. This type of security fencing is the least visually obtrusive and will be backed up with tree screening where needed to enhance the visual aspect and reduce any detrimental impact left from the demolition works of the ex Monsanto site. Posting will be set in concrete footings to support the 1.8mt wire mesh fencing panels as seen here. This type fencing will be used in high visual areas to provide security for the remaining Eastman's site.



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This PR-TW-2.0 is an example of the Wire Mesh Panel Type Fencing to be used. Some variation will have to be allowed for and expected depending on the contractor awarded the installation work and their suppliers. However the above drawing is representational of what is planned for and expected. This will provide secure perimeter fencing while minimising visual disturbance to the potential tourist industry and trade. This fencing will also have to provide an effective barrier for the eventual remediation of the ex Monsanto site and full reinstatement of the Plas Kynaston Canal all the way to the Queens Hotel in Cefn Mawr in a later phase of the “Back to the Future for Cefn Mawr” program for our community.



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## Fencing Specification

Twin wire mesh panel and post systems give an extremely strong mesh panel with a flat profile made (as the name suggests) with "twin" horizontal wires to provide a rigid fence. Pro-twin horizontal wires welded to 5mm verticals, often referred to as 656. This system is also available in extra heavy duty 868 specification which has 8mm twin horizontal wires welded to 6mm verticals. The system can be obtained in a range of heights including 1m, 2m and 2.4m and by combining panels a range of fence heights can be achieved. The robust flat profile makes this fence ideal for use in sports applications including Ball Stop fencing and MUGAs (Multi-Use-Games-Areas). Use of the heavier 868 panels at lower level is recommended where there will be hard ball impacts. Posts are manufactured from different specifications of steel tube to suit the fence height. Fixings to attach the Pro-twin panels to the posts are made from steel backed by anti-rattle rubber pads and fixed to the posts by stainless steel tamper-proof security bolts. The finish of the mesh fencing and the posts is galvanised and polyester coated in Green RAL6005 or any one of a wide range of standard RAL colours.

### Mesh

Wire: 6mm horizontal, 5mm vertical  
Aperture: 200 x 50mm  
Width: 2560mm  
Height: 2030 / 2430mm  
Finish: Galvanised & PPC green

### Posts

Dimensions: 60 x 60mm  
Lengths: 2620 / 3070mm  
Finish: Galvanised & PPC green

### Fixings

60mm x 30mm steel clip  
M6 x 40mm Tamper proof screw

### Installation

Post centres: 2520mm  
Clips per post: 4 x 2m / 5 x 2.4m

Height	Width	Mesh Size	Panel Weight	Post Length	Post Weight	Post Centres	No of Clips per Post
2.0m	2.506m	200mm x 50mm	28kg	2.62m	10.6kg	2.52m	4
2.4m	2.506m	200mm x 50mm	30kg	3.07m	12.3kg	2.52m	5



### Key Features

- A robust mesh panel and post system combining security with aesthetic appeal
- A twin wired system 6mm horizontal and 5mm vertical wires, ideal for sports grounds
- Panels secured to 60mm x 60mm posts with a steel clip and a tamperproof screw
- Available in green RAL6005 in heights of 2.0m and 2.4m

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## British & European Standards

All fencing installed at site will comply with the relevant standard for such as specified in the following:

- BS EN 1722-14 : Specification for open mesh steel panel
- BS EN 17722 Part 16 Specification for powder coatings
- BS EN 1722-18 : Specification for steel mesh site perimeter temporary fencing systems

## Tree Screening



The site is becoming over grown and there are many trees appearing and with simple tree management these can be supplemented with planters to provide an effective tree screening of the site. This picture of WBG shows how effective this can be with the tree screen each side. And the only part of the ex works site showing in the middle. Therefore an allowance is being made in the quantity estimate for tree screening of both Jessop's Tramway and WBG. The Gateway to Cefn Mawr and the Pontcysyllte Aqueduct and a Leyladii evergreen tree type is preferred as this gives all year round coverage, is fast growing and cost effective. It is a hardy species and has a proven habitat capability as can be seen with the trees to the right of picture. These mask the site well and provide an aesthetic background. Tree spacing will as determined by existing growth of other species to ensure maximum bio diversification and minimise expenditure. See Eastman's JT 300mts Plan & Arial View.



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The Leyland cypress, *Cupressus × leylandii*, often referred to simply as leylandii, is a fast-growing coniferous evergreen tree much used in horticulture, primarily for hedges and screens. Even on sites of relatively poor culture, plants have been known to grow to heights of 15 metres (49 ft) in 16 years. The tree is a hybrid, almost always sterile, and propagated mainly from cuttings. Leyland cypress is light-demanding but is tolerant of high levels of pollution. A hardy, fast-growing natural hybrid, it thrives on a variety of soils and sites. Although widely used for screening, it has not been planted much for forestry purposes. In both forms of the hybrid, Leyland cypress combines the hardiness of the Nootka or Alaska cypress with the fast growth of the Monterey cypress.



Effective mixed species tree screening along New Road / Queens Street with the ex-Monsanto site to the left completely masked by healthy trees that remove CO<sub>2</sub> from the atmosphere and return oxygen. The PKC Group is even looking at research institutions for finding solutions for the contamination of the site through Green Chemistry where plant species can be used to help remediate the site, while producing a useful crop and participating in the general aesthetic fauna background and photosynthesis process.



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## Hoardings

The long lengths of fencing surrounding the site also offer the opportunity for advertising and promoting the redevelopment of the site contained within the boundary of the perimeter fencing. This can be used to good effect if the footfall is raised, which is the whole point of this planning application.



By opening up WBG & JT and encouraging people to come into Cefn Mawr as well as visit the aqueduct this can provide a very good and cost effective advertising medium that will reach many people. The known annual count for the aqueduct is +200,000, and people travelling at a leisurely pace along Jessop's Tramway will have plenty of time to read what is on the hoardings. The PKC Arts Director suggested this and this makes a lot of sense.

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An example hoarding of what the PKC Group have in mind for the “Welsh Dragons of Cefn Mawr”, this being taken from China Town in Liverpool and the route and length of JT & WBG would be an ideal venue for providing dramatic and appealing large scale images cost effectively. Note additional posting will be required at the sections for hording displays to take account of the wind age factor.



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## Brownfield Site Hard Surfaced



The bulk of the site is hard surfaced and just requires weeding such as this large block paved area and is therefore fit for purpose.



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The exiting section of WBG on lease to WCBC from Eastman's and in very good condition, just unused because of a lack of correct signage and tourist guidance information

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## The Underpass



A view of the underpass with Queens Street crossing the bridge, this will allow people to cross from one side of the road to the other in complete safety and will allow circular routes with a horse and hackney carriage service.



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The underpass allowing people to cross from one side of the WBG Interchange to the other without crossing the road



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The underpass of Queens Street looking towards the Aqueduct and simple landscaping with a few evergreen bushes can make this look very attractive at marginal cost.



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## Landscaping



The unsightly mess of the land at the back of the Holly Bush Inn that had been let go by the previous brewery owners and their tenants, supplemented by the litter problem. The land was in poor condition along with what was the back yard of the Holly Bush Inn which was covered with broken course stone tarmac.

The new Tesco Supermarket can be seen in the distance served by the new Oxford Street seen here. This works well for the Holly Bush Inn however it also acts as a bypass for the traditional shopping centre of Cefn Mawr which has seen a significant drop in footfall since the opening of the £20M Tesco supermarket in 2012.



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The same scene looking back towards the Holly Bush Inn in fall of 2016 following landscaping works. This work was completed by local contractors to a very good standard. After dialogue with the Local Community Council and Tesco planning permission was sought to remove the rather unsightly galvanized road barriers and has been replaced by traditional Cefn Sand Stone Walling to improve the area. This is used as an example of the standards that will be achieved at the WBG under this proposal and planning application.

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## Picnic Area



This is an example of what is planned and the final version will be based on the winning quote as supplied by the timber frame building manufacturer. These are supplied as kits which will determine dimensions and look however this serves as a good illustration of quality, build and size being sought for the Windborne Gateway Interchange and it is expected this will be popular.



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## Public Toilets

A simple public toilet block should be provided. This would then supplement the exiting public toilet facilities at the Trevor Basin and the planned public toilets at the Holly Bush Inn, Cefn Mawr.

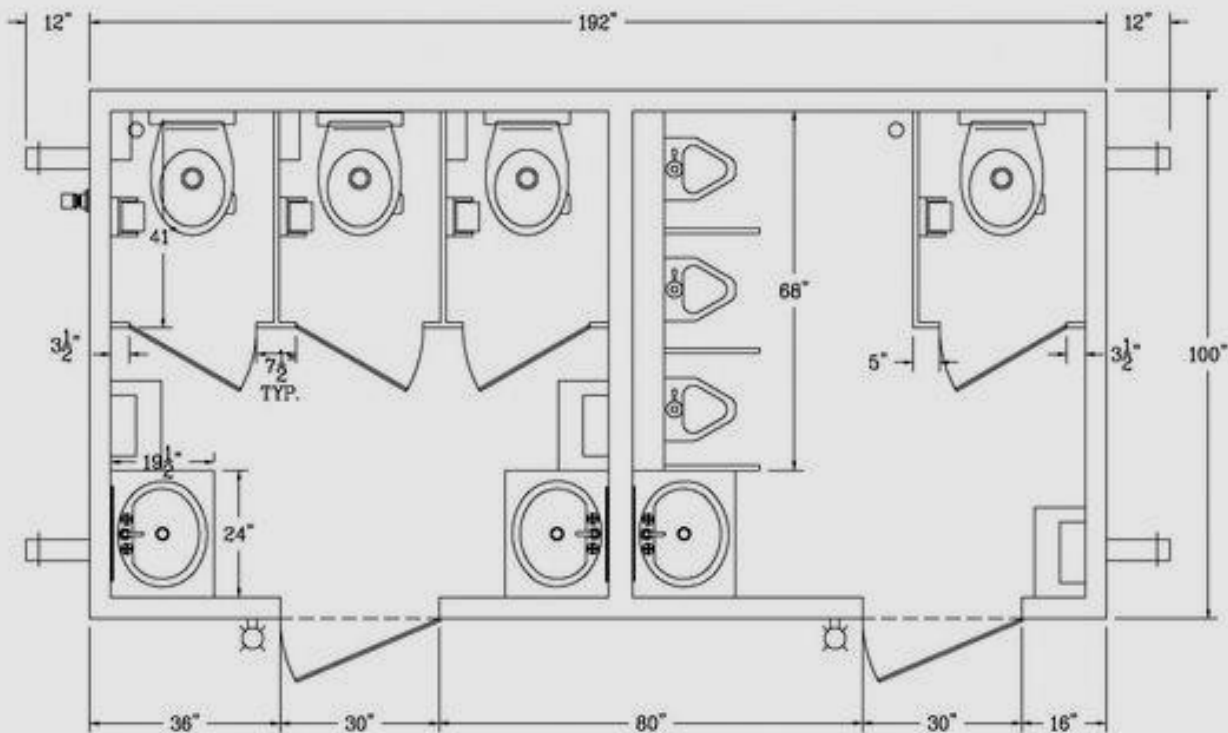
If kept clean and run properly they would help encourage repeat visits and use of the Windborne Gateway Interchange facilities encouraging more people to visit Cefn Mawr and the Aqueduct.

A simple block construction is favoured by the PKC Group with DDA provision. It is to be built in a traditional style of stone and render with a slate roof. In the case of the WBG Toilet Block the stone would be Cefn Sandstone.

The PKC Group particularly like this example because it is simple, traditional and has a notice board showing information on the local area. These places are ideal for display boards as they are well used and a focal point for people to come to, so display boards here can be very effective to inform people of what is available in the local area.



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Simple modest floor plan layout that is easy to clean and maintain.



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## YOU ARE HERE SIGNAGE

Signage is extremely important and the Windborne Gateway Interchange will have prominent YOU ARE HERE signage showing Cefn Mawr and the aqueduct as well as the rest of the World Heritage Site.

This sign is unfortunately a typical example the current state of affairs as regards the representation of our community, Cefn Mawr, the largest community in the World Heritage Site. Cefn Mawr has been positively excluded from the WHS in most material produced for the tourist industry and this must change.

Given the good guidance by the WAG through the SDC, FGA 2015 and the PPW 2016 there is no excuse for omitting our community and hindering our ability to switch our community form post industrial to that of Sustainable Tourism Development.

To see what is wrong with the current signage, see [“Where is Cefn Mawr”](#)



# Windborne Gateway Interchange Technical 2017

## Material Quantities Estimate

- |                            |  |
|----------------------------|--|
| • Mesh Panel Fencing Green | 200mts X 1.8mt galvanised and green powder coated                            |
| • Tree Screening           | Leyladii 200 tree saplings   |
| • Landscaping              | 100 Various shrubs and trees   |
| • Composting               | 4 pallets  |
| • Walling repairs          | Used brick and Cefn Sandstone  |
| • Block Paving Repairs     | Regular block paving to match existing where required                        |
| • Gravel bed Repairs       | Suitable tonnage of gravel stone (to be assessed when cleared)               |
| • Toilet Block             | Finished in Cefn Sandstone (drawings to be prepared similar to that shown)   |
| • Pick nick Area           | Simple timber seating area (drawings as per kit supplied from winning quote) |
| • YOU ARE HERE Signs       | 2 Signs one each side of Queens Street                                       |

This provides a perimeter security fence 2mts high each side of the old warehouse site with a basic evergreen tree screen. Initially the tree screen will only be 1mt high but these plants are known for high growth rates of up to 1mt per year and therefore in 3 years they will have formed a reasonable hedge and on the fourth year will require hedge cutting and managing as time goes on.

The removed palisade fencing, 300mts of it can be reused to secure the main site and establish the shortest run 180mts between existing fencing runs and using the best topographical elevations.

No 4 gate is a simple swing type gate so this is probably the best gate to reuse to minimise maintenance costs for Eastman's until the site is remediated.

Removal and reuse of unsightly palisade fencing in appropriate areas will drastically improve the appearance of the area at a minimal cost.



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## Regression



The PKC Group were hoping to reuse weighbridge gate house for public toilets after conversion as in their 2012 planning application as this would have reused an existing building but unfortunately Eastman's demolished the building in 2015.



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Where the weighbridge gatehouse and potential toilet block was, this is going backwards not forwards and does not comply with WPP.