

**CRAI WATER TREATMENT WORKS,
PROPOSED EXTENSION**

VISUAL IMPACT ASSESSMENT REPORT

REV C

Client:

Black and Veatch
Pembroke House
Charter Court
Phoenix Way
Swansea Enterprise Park
Swansea
SA7 9EH

CL06330

NOVEMBER 2006

***Crai Water Treatment Works
Visual Impact Assessment
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Crai Water Treatment Works (WTW)

Visual Impact Assessment

Landscape Character Appraisal

The proposed site is a rural location within the Brecon Beacons National Park, on the fringe of the Black Mountains. The site can be found in an upland valley approximately 2km north-east of Craig-y-nos Country Park. The site's immediate surrounding is predominantly agricultural improved grassland used for grazing. In the wider context much of the surrounding hillsides have been designated with rights of access by the Countryside Council for Wales. Semi-natural broadleaf woodland, wet heath/acid grassland, marshy grassland and plantation coniferous woodland are the main land use types in the area, as identified by the Phase Habitat One Data.

The proposed site is on land owned by the adjacent Dderi Farm, who currently access the land via an underpass, where they graze sheep in the field. The new stretch of the A4067 main road travels adjacent to the proposed site and supersedes the old main road. The old road is still in existence at this point, although disused, and runs parallel with the proposed site; this is proposed as an access route into the extended works.

The Nant Tywynni flows along the eastern boundary of the site, creating an attractive river corridor of a range of mature tree and plant species, including maple, ash, beech and willow. There are very few residential properties near the site, and none have direct views of the proposed development.

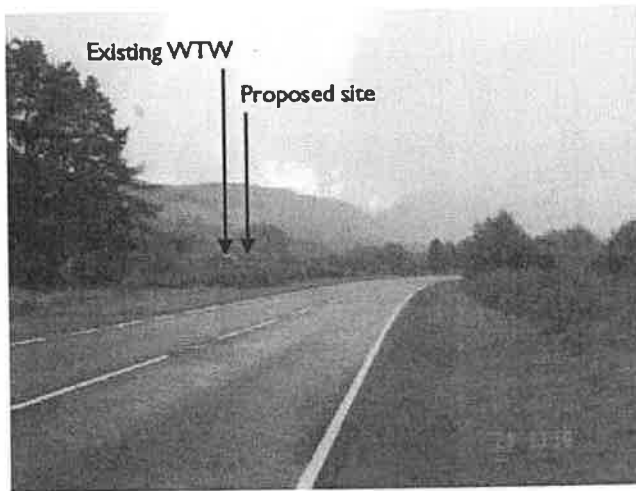
Key Receptors

There are a number of key visual receptors of the proposed development; these are identified as 'close' and 'distant' receptors. Key views have been identified for these receptors, based on their existing quality and amenity value. Key view point locations and direction can be found on the Viewpoint Locations Plan, Drawing No. CL06330-100-003, which can be found in Appendix A.

Close receptors

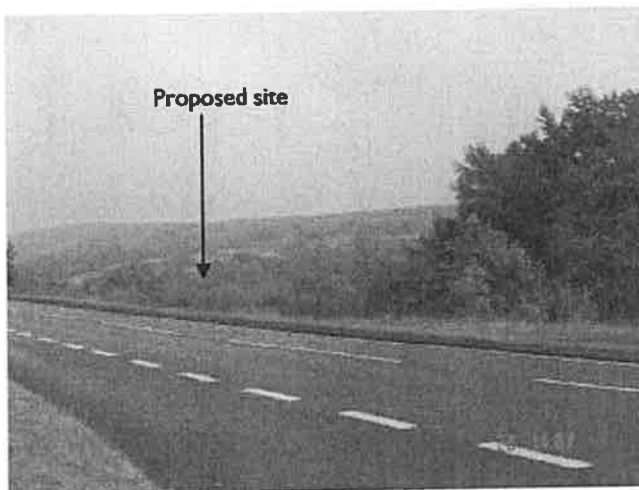
Road users (Key viewpoint 1+2)

The vehicular traffic travelling along the A4067 will have views looking across into the proposed site. Passengers and drivers in buses, lorries and coaches will have clearer views into the site, as their elevated position (compared to cars/motorbikes/cyclists) will allow them to look over the existing roadside vegetation and hedgerow. Mitigation measures will need to address the views from the varying heights of vehicles. It is worth noting that the site is moderately well screened during the summer months, although it will become more exposed during the winter and spring months. Seasonality will be an important issue to address during the mitigation process.



Key viewpoint 1.
*Looking south-east along the
A4067 towards Glyntawe.*

Key viewpoint 1 is from the A4067 looking south-east towards Glyntawe, the impressive range of hills in the background is framed by the trees in the foreground; the road sweeps away and draws the eye towards the valley views. Even on a rainy day the dramatic landscape remains spectacular. The proposed covered water treatment plant will impinge on this framed view.

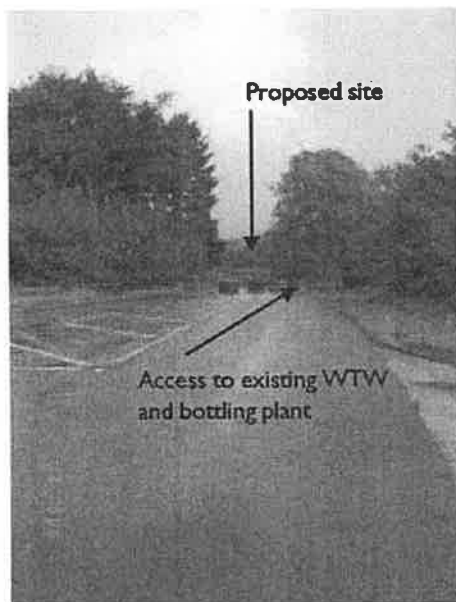


Key viewpoint 2.
*Looking north-east from the
A4067 towards the site.*

Key viewpoint 2 is from the A4067 looking north-east towards one side of the Fan Gyhrych hill.

Public footpath users (Key viewpoint 3)

A Public Footpath emerges (via a stile) just to the south of the site, it meets the old road, which is now a lay-by and serves as an access into the existing WTW and the Danone bottling plant. Although walkers have limited views toward the proposed site from the stile, views into the site (key view point 3) are noticeable as walkers approach the stile from the lay-by. The existing mature vegetation is effective in screening the proposed development during the summer months, however views will be more apparent during the winter and spring months when the deciduous trees are not in leaf.



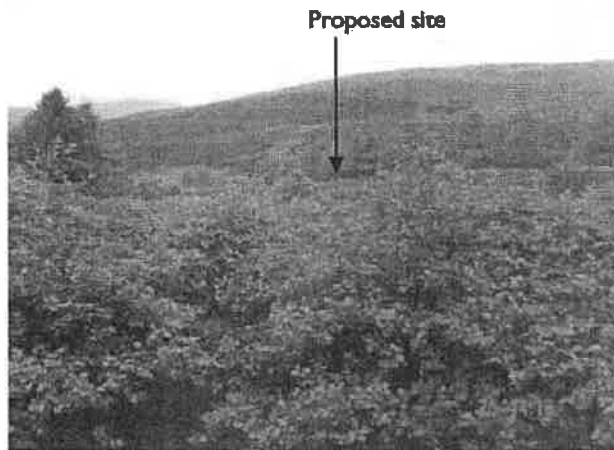
Key viewpoint 3.
Looking north-east towards the proposed site.

Public bridleway users (Key viewpoint 4)

A request has been made to the Public Rights of Way Officer by Glan Tywynni farm to re-route the Public Bridleway which currently passes to the north of the proposed site and past Glan Tywynni farm. Although the existing Bridleway is marked on the OS map Explorer OL12, on site there is no signage, and no bridge crossing the Nant Tywynni.

The proposed route will start at the access road to the existing WTW, and run parallel with the Nant Tywynni until turning east along the boundary between the existing WTW and the bottling plant (it is proposed to run along the bottling plant side of the boundary). The main views into the site from the proposed Public Bridleway are along the access track to the WTW and bottling plant. Increasing the existing streamside vegetation along this short stretch would reduce the views of the proposed building and associated works.

A plan of the existing and proposed routes can be found in Appendix B.

**Key viewpoint 4.**

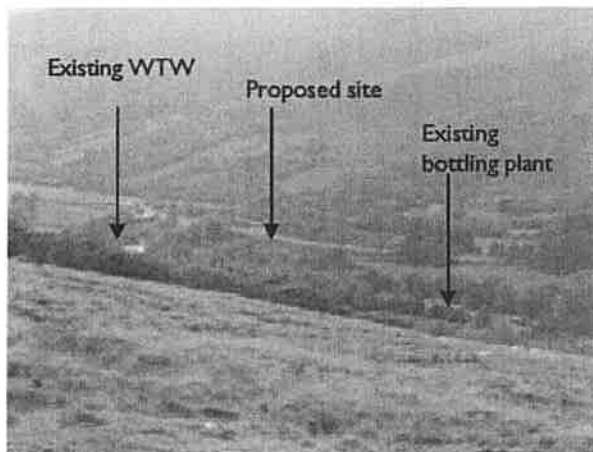
Looking west across the Nant Tywynni towards the A4067.

Tafarn-y-Garreg Public House visitors

The Tafarn-y-Garreg Public House can be found 250m south-west of the site, along the A4067. This is popular with visitors, especially during the warmer months; there is an overspill car park for patrons opposite the pub and a provision of outdoor seating to the front of the pub. Views from the pub towards the proposed site are limited, due to the landform and existing mature vegetation.

Distant receptors**Permitted footpath along dismantled railway (Key viewpoint 5)**

A permitted footpath travels along the line of the dismantled railway upon the hills to the east of the site (grid reference 858173). Walkers have a relatively screened view of the existing site due to mature trees adjacent to the site, along the Nant Tywynni. Views towards the existing water treatment works are obscured by existing mature vegetation on the hillside (in the foreground) and around the works itself (key viewpoint 4). The Danone bottling plant is visible to walkers from the permitted footpath; although a row of established conifers currently mitigates the negative visual impact of the plant.

**Key viewpoint 5.**

From the permitted footpath, looking south west towards the proposed site.

Surrounding hill users

Crai WTW is nestled amongst the hills of Cefn Cul, Fan Gyhirych, Fan Fraith, Allt Fach and Carreg Goch; many of these impressive hills are designated as 'land with rights of access'. This attracts walkers, paragliders and hang gliders to frequent the hill tops – these users have views down towards the existing and proposed sites.

The South East Wales Hang Gliding and Paragliding Club, as well as visiting pilots make use of the flying opportunities the surrounding hills have to offer. It would be virtually impossible, and quite impractical to attempt to mitigate the development for the gliders; the very nature of their sport means they may view the development from directly above it.

From a certain level above the proposed development it is unrealistic to think that the scheme can be totally hidden from view for walkers. Nonetheless proposed screen planting adjacent to the works will go some way to reduce the negative visual impact from the surrounding hillsides.

Visual impacts

The visual impact of the proposed scheme will need careful consideration due to its location within the National Park, and the intrinsic beauty of its setting. However the proposals are an extension of the existing WTW and will lie adjacent to a bottling plant; this demonstrates that the landscape is able to accommodate similar types of buildings and land uses. Nevertheless the bottling plant and existing WTW are set back and down from the road, with different layers of mature vegetation screening the views into the two sites. Whereas the proposed site for the extension works is set adjacent to the road, and on relatively higher ground than the existing works. Consequently tree screening will play an important role in reducing the negative visual impact of the development on the existing views.

The following bullet points outline the main visual impacts of the proposals from each of the key view points. Information is given in terms of when the impacts will occur (during construction or operation) and whether the impact is positive or negative, and temporary or permanent. After each impact the suggested mitigation measures are outlined, these are supported by the Detailed Planting Proposals Plan, Drawing No. CL06330-100-002, which can be found in Appendix C.

General impacts

Construction

Visual impacts

- Temporary loss of visual amenity due to works machinery and vehicles accessing and working on site.

Visual impact: moderate adverse

Suggested Mitigation:

- Employ best practice methods during construction, for example where possible locate construction compounds and storage areas away from key viewpoint receptors and adjacent to suitable vehicle access points.
- Ensure the safety of Public Footpath and Bridleway users is considered, both routes are within close proximity to the site, and will potentially share the lay-by and existing access with works vehicles. Liaison with the Public Rights of Way Officer required.

Operation

Visual impact:

- Temporary loss of mature streamside vegetation on the right bank of the Nant Tywynni, to make way for the proposed access road into and through the site.

Visual impact: moderate adverse

Suggested mitigation:

- Ensure that vegetation removal is kept to a minimum, attempting to retain as much of the existing mature planting as is practically possible.
- Replant the remaining areas (in some parts the access road will encroach on existing planted areas) between the proposed road and the stream with species similar to existing (including ash, willow, alder and oak).

Note on photo sketches

The photo sketches have been produced to give an impression of the visual appearance of the proposed scheme when the screen planting has been introduced. The proposed planting is shown as well established, maturing vegetation of approximately 15-20 years since planting.

Key viewpoint 1 – road users

Visual impacts during operation:

- Permanent reduction of the visual amenity for the road users, more so for vehicles such as lorries, buses and coaches. The framed view towards the valley will include the proposed building roofline.

Visual impact: moderate adverse

Suggested Mitigation:

- Dense screen planting along the existing embankment between the new road and the disused old road. The planting will be a woodland mix with an upper storey tree layer, an under storey tree layer and a glade/shrub layer, to be comprised of native deciduous and coniferous species which are similar to species already existing in the area.
- Proposed tree planting behind the existing hawthorn boundary hedge; to provide another layer of screen planting with particular regard to the visual impact of the pressure vessels.
- Specify an appropriate building finish, for example the existing WTW building has been finished in a warm orange-brown, with the associated tanks and storage containers in a dark green, to encourage the proposed works to visually fit into the existing landscape. Refer to Appendix D 'example image of existing building'.



Key viewpoint 1.

Photo sketch of proposals without mitigation measures.



Key viewpoint 1.

Photo sketch of proposals with suggested mitigation measures.

Key viewpoint 2 – road users

Visual impacts during operation:

- The pleasant open views towards the Fan Gyhirych hillside will be permanently reduced by the proposed building roofline. These views will negatively impact vehicles passing on the A4067, particularly the taller vehicles such as lorries, coaches and buses.

Visual impact: moderate adverse

Suggested Mitigation

- Dense screen planting along the existing embankment between the new road and the disused old road. The planting will be a woodland mix with an upper storey tree layer, an under storey tree layer and a glade/shrub layer, to be comprised of native deciduous and coniferous species which are similar to species already existing in the area.



Key Viewpoint 2 photo sketch with suggested mitigation measures

Key viewpoint 3 – Public Footpath users

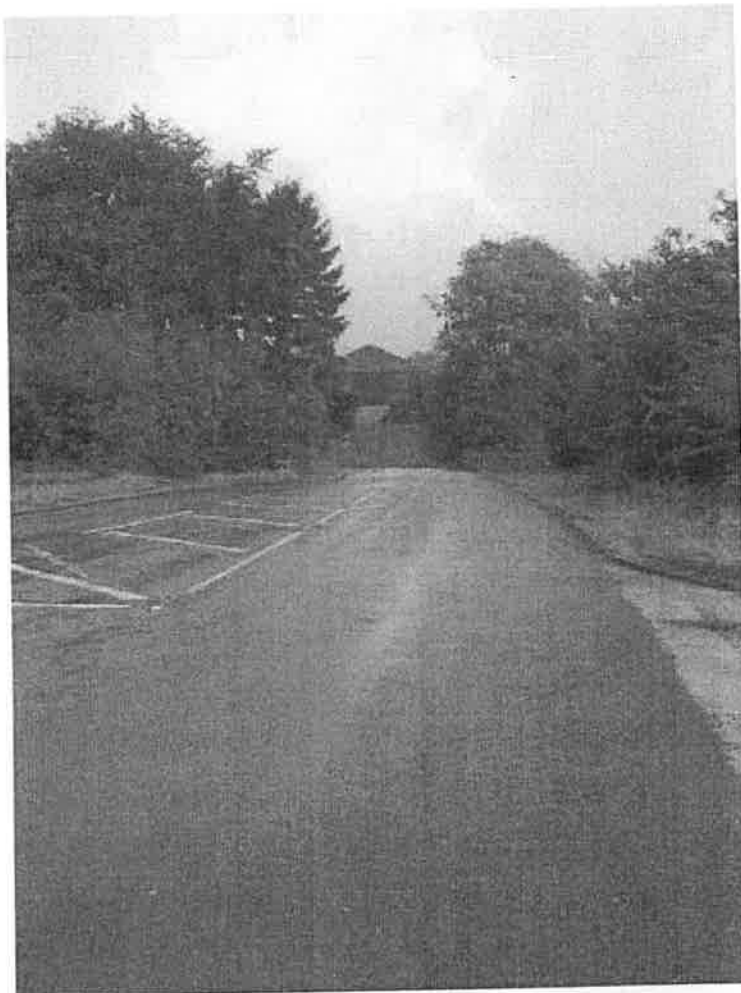
Visual impacts during operation:

- Walkers will have permanent partially obscured views of the south face and west side of the proposed building, the lime silos and chemical storage tanks.

Visual impact: moderate adverse

Suggested Mitigation:

- Proposed planting at the southern end of the proposed site, to tie into existing mature planting. This will help to screen the negative views, although the west face of the building will still be partly visible due to the lie of the land. The proposed planting will include native coniferous species to take account of seasonality.
- The existing hawthorn hedge, which is the field boundary, should be managed to an increased height of between 2.0 and 2.4m, this will limit the views of the side of the proposed building.



Key Viewpoint 3 photo sketch with suggested mitigation measures

Key viewpoint 4 – Public Bridleway users

(assuming the proposed re-route is approved)

Visual impacts during operation:

- Horse riders will have permanent, negative views over the existing vegetation along the Nant Tywynni into the southern end of the proposed site, the building, lime silos, chemical storage tanks and access road will be visible from the key view point along the Bridleway.

Visual impact: major adverse

Suggested Mitigation:

- Proposed hedge planting to tie into existing hedgerow (along access to bottling plant), with similar species and managed to a similar height as existing, of approximately 3.0m.
- Proposed tree planting on the right bank of the Nant Tywynni, to tie into existing species and to incorporate a deciduous/coniferous mix.



Key Viewpoint 4 photo sketch with suggested mitigation measures

Key viewpoint 5 – permitted footpath users (along dismantled railway)**Visual impacts during operation:**

- The roofline of the proposed building will have a negative visual impact for walkers along the permitted footpath. However the existing views of the WTW and bottling plant rooflines have been limited by the existing mature tree stock, which break the line of view.

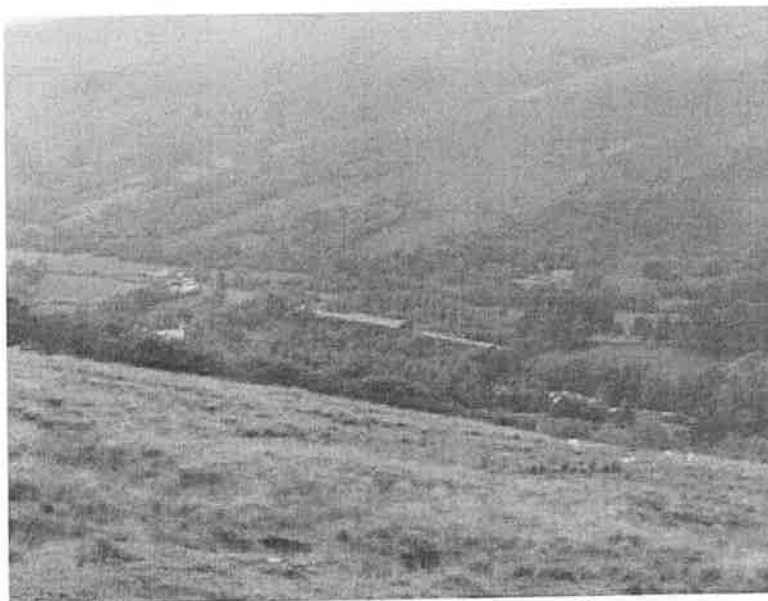
Visual impact: moderate adverse

- The uncovered pressure vessels will be noticeable from the footpath; this can be limited with the aid of timber fencing around the vessels. It is suggested that the fencing used is similar to the green timber fencing found at the existing WTW, refer to Appendix D 'example image of existing timber fencing'.

Suggested mitigation:

The proposed tree and shrub planting suggested for other areas of the site will aid a reduction in the negative visual impact of the proposed works. However, further mitigation measures are suggested:

- To mark the boundary between the proposed works and the remainder of the field which the works are to be located in, a new hedgerow is proposed. This will run across the site from the disused road to the Nant Tywynni. The hedgerow will be comprised of species similar to the existing hedgerow. A timber post and wire stock control fence will be erected no less than 1.0m away from the outside edge of the hedge, to protect the newly planted hedge from grazing animals.
- The area between the proposed hedge and the proposed access track will be planted with clusters of tree species such as *Quercus robur*, *Fraxinus excelsior* and *Pinus sylvestris*. The trees will be planted into a low maintenance wildflower meadow mix such as EM2 Standard General Purpose Meadow Mix, Emorsgate Wild Seeds.



Key Viewpoint 5 photo sketch with suggested mitigation measures

Residual effects:

It is anticipated there will be a minor increase in the volume of works traffic during the operational phase of the proposed works. This is likely to add a minor negative visual impact.

Summary

Once the planting proposals have established, the proposed development will have a minor negative visual impact for the key receptors. The proposed planting will tie into the existing landscape and help to reduce sight of the WTW extensions. The planting has been designed to enhance the habitat opportunities for local wildlife.

Crai WTW

Visual Impact Assessment
REV C.

Appendix A

Viewpoint Location and Direction Plan, Drawing No. CL06330-100-003



FOR PLANNING

**FERGUSON
McILVEEN**

Ferguson McKee LLP
26 City Road, Queens
T 617 241 3041 M
F 617 241 3041 W
E info@fergusonmckee.com

Crai Water Treatment Works Black and Veatch, Swansea Vetwpoint Locations Plan

not to scale

Designed by
AJW

Nov-06

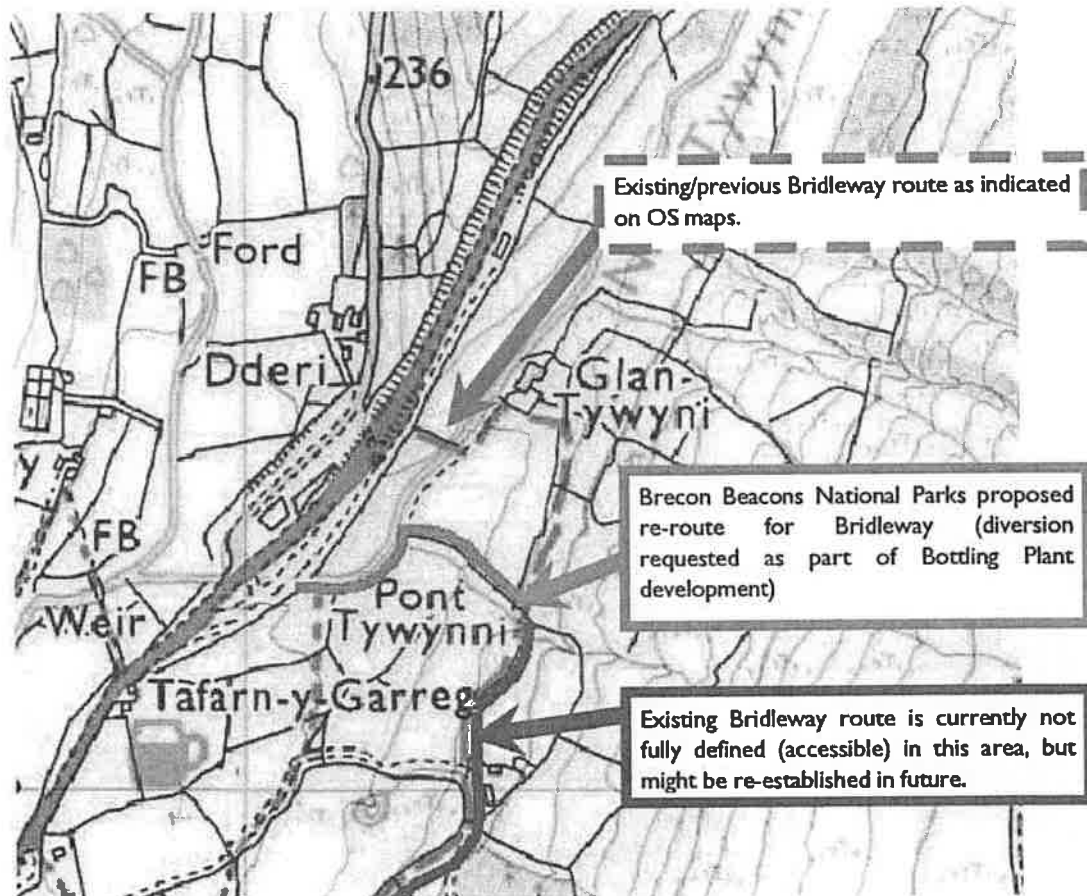
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Appendix B

Map showing the existing and the proposed route for the Public Bridleway



Cral WTW

Visual Impact Assessment
REV C.

Appendix C

Detailed Planting Proposals Plan, Drawing No. CL06330-100-002

Ferguson McIlveen

radiant and perceived

Exiting, pedestrian, hallway, College, occupied body, yr in number to a height of between 2.5 dm and painted during construction with

REASON TREE PLANNING
Required the students of 12th semester to be presented before the faculty to explain the reasons of the present situation, identify the underlying causes and develop strategy for the future.

Finally, productivity (output/cow/hour) of the milking machine to be compared is a function of distance 1.5 km and practical dairy conditions (milk).

It helps to be aware that any good service to small dairy farmers is still

Finally, Japanese farmers

Figure 1. Aerial photograph of a city street intersection with a grid overlay.

An aerial photograph of a residential development. A winding road runs through the center of the image. Several houses are visible, some with red lines drawn along their boundaries. A red arrow points to a specific house on the right side of the road.

PROPOSED HEDGEMAN
 Specimens to be planted at 300mm centres, in a double staggered row, to occupy the following
 10 hectare areas: Dog farm - 2.5%
 18 ha. Gurney vineyard 'Dappled' - 5%
 20 ha. Ceylon sandalwood 'Himal' - 10%
 27.5 ha. Chittagong vineyard 'Himal' - 60%
 20 ha. Avar vineyard 'First Harvest' - 10%
 10 ha. tea plantation 'Himal' - 2.5%
 20 ha. Vietnamese opium 'Cumbler Road' - 10%

[illegible]

CLUSTER THE
Proposed cluster
is 2/3 the size of
cluster seen by
NCEI. From the

PROPOSED PRESSURE TREATMENT TO BE APPLIED TO
PRESSURE-TREATED GRASS STRAW FOR USE TO DECORATE

Specimens to be included:

- 96 No. *Rana carnea* Doug. Reuss - 2.5%
- 193 No. *Carnus sanguis* Degeer
- 375 No. *Corylus satana* Thunb. - 10%
- 2256 No. *Corticaria mucron* Westw.
- 375 No. *Acer campicola* Test. Muls.
- 96 No. *Ter. aquilum* 1 leaf - 2.5%
- 375 No. *Vernum opulus* Thunb. Reuss

Specimens to be included:

- 15 lbs. Ross cream Dog Food - 2.25¢
- 25 lbs. Cornet margarine Dolebrand
- 50 lbs. Crystal America Tissue - 10¢
- 300 lbs. Catalpa styrofoam Vaseline
- 50 lbs. Ace Hardware Toilet Tissue
- 15 lbs. Ace Hardware Toilet Paper
- 15 lbs. Ace Hardware Toilet Paper
- 50 lbs. Whammy Toilet Paper



SCREEN FENCE

EXIST	EXIST VEGE	VEGE AND R
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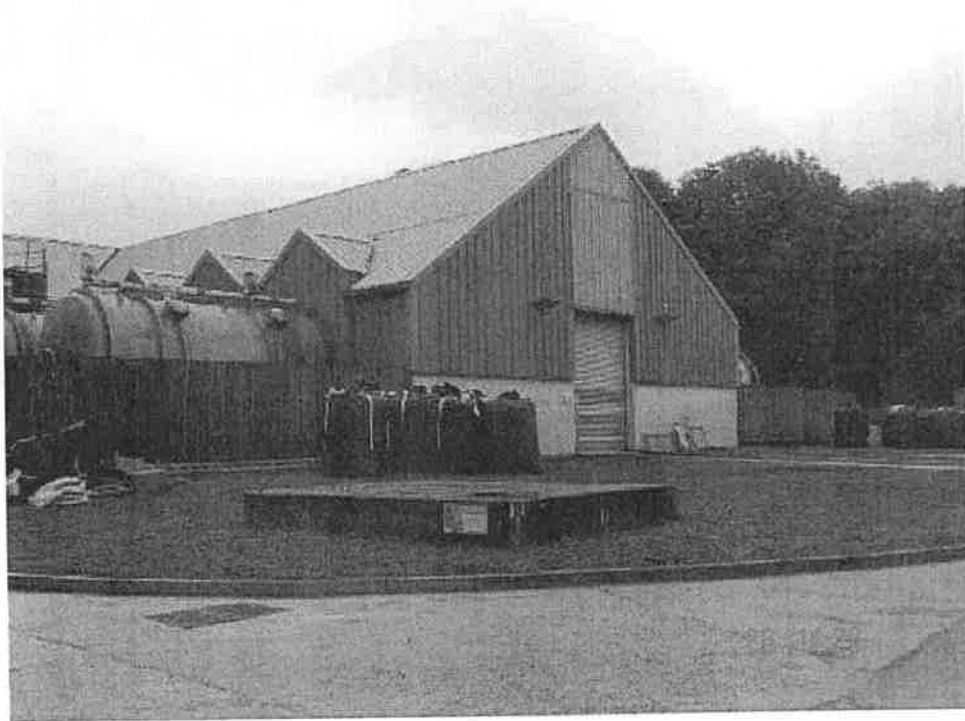
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Crail Water T
Black and V
Detailed Pla

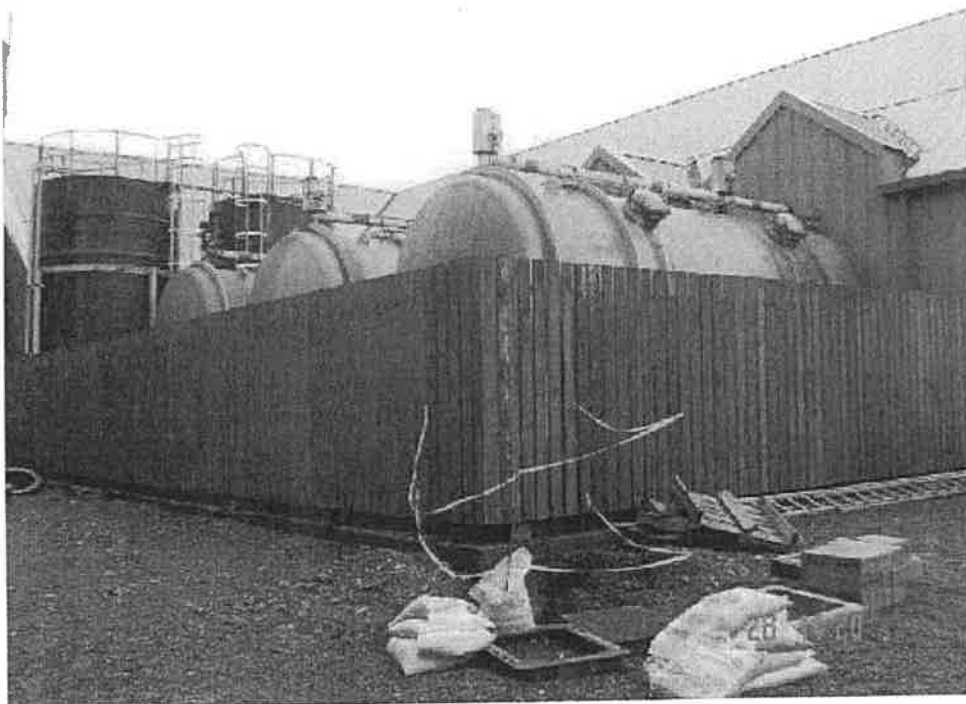
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Date	Oct-06
As No	CL0633

Appendix D

Example image of existing building



Example image of existing timber fencing



If you have any questions or require any further information please do not hesitate to contact myself at the Chester office.

Yours sincerely,

Emma Stevens
(Principal Environmental Consultant)

Enclosed:
Proposed Scheme Layout
Figure 1 Environmental Constraints

NOTE: Map is for general information only. It is not intended to be used as a legal document. The user assumes all liability for any use of this map.

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PROPERTY, RIGHTS, OR
FEDERAL, STATE, OR
LOCAL, OR PRIVATE
PRESSURE, OR OTHER
DRAINAGE, OR OTHER



PRELIMINARY

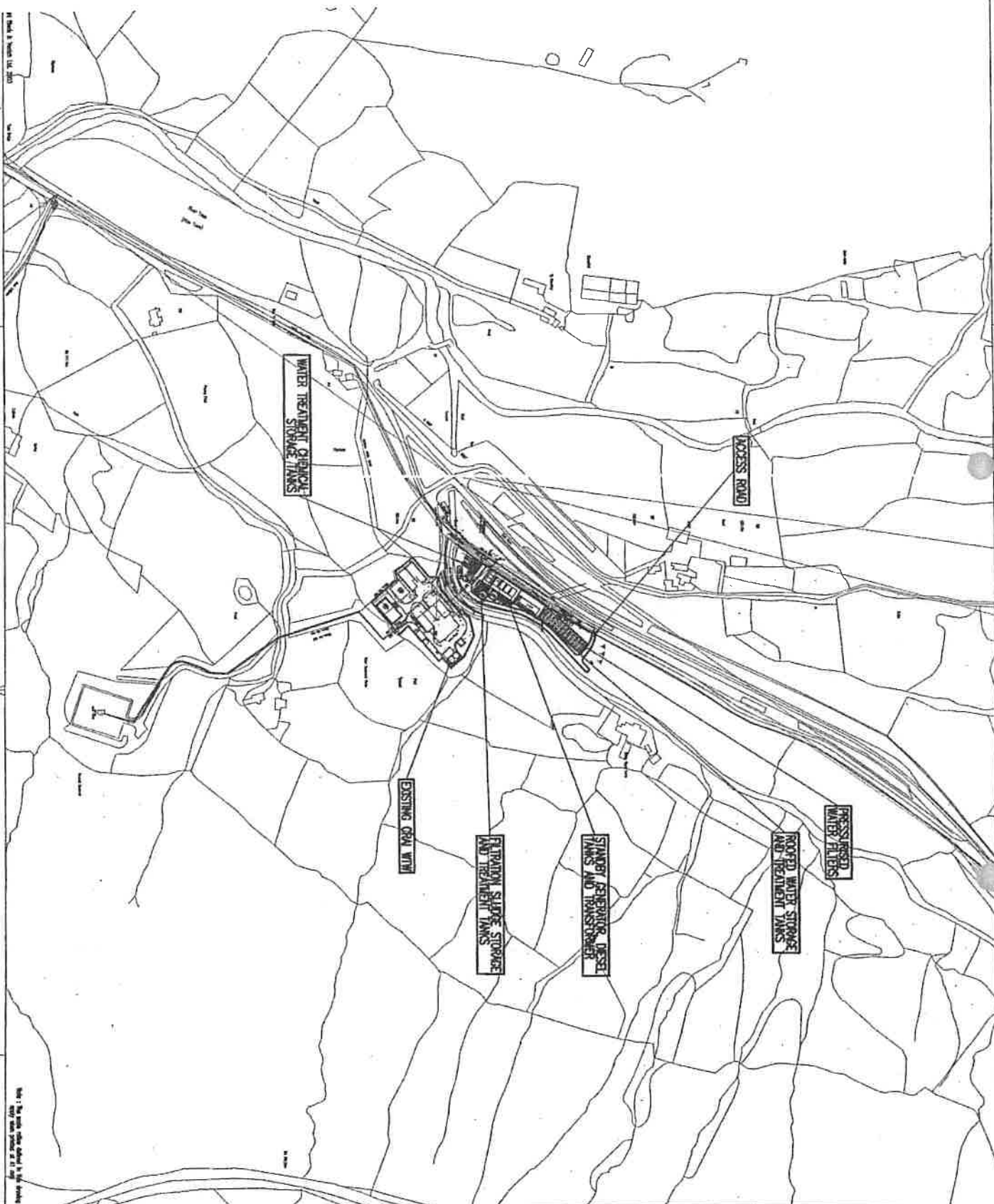
NO.	DATE	DESCRIPTION
1	10/1/75	Initial Survey
2	10/1/75	Final Survey
3	10/1/75	Final Survey
4	10/1/75	Final Survey
5	10/1/75	Final Survey
6	10/1/75	Final Survey
7	10/1/75	Final Survey
8	10/1/75	Final Survey
9	10/1/75	Final Survey
10	10/1/75	Final Survey

Capital Alliance South West 1

BLACK & VEATCH
Engineering, Planning, Architecture
1000 North 17th Street, Suite 100
Phoenix, AZ 85016, United States

Proposed Site For
Environmental Report

Drawing No. 141333 00 7564



Note: The water rights shown in this drawing are for the purpose of the project only.

Impacts and mitigation

Designated Nature Conservation Sites

There are no statutory or non-statutory sites in or adjacent to the proposed working areas. The nearest statutory sites are within the upland hill and cave areas. The nearest is approximately 1km from the site, Ogof Ffynnon Ddu-Pant Mawr Site of Special Scientific Interest (SSSI), which is designated for its cave system, limestone pavement and heath.

Habitat

Only low quality pasture habitat will be affected by the WTW extension. There may be a need to remove a few trees adjacent to the river for a new pipeline and these should be replaced. The riverine trees often overhang the field by a few metres and wherever possible works should take place outside the canopy to avoid damage to the trees. Any lopping of trees should be carried out by a qualified arborist.

There may be a requirement for a river crossing for a new pipeline. If possible this should be carried out using threading or no-dig methods to reduce disturbance to riverine habitats, fish and to reduce the risk of pollution. The Environment Agency should be contacted for any restrictions on timing with regard migratory fish; brown trout were seen during the survey. If open cut is required a detailed method statement will need to be prepared and submitted to the Environment Agency Wales and should include the re-instatement proposals. The river bed will need to be carefully re-instated to its existing condition.

Protected Species

The Phase I survey area was searched for field signs of protected species. Areas not accessible at this time are shown on Figure 1.

No field signs of badger were found during the surveys. However, a badger latrine was recorded in 2003 (grid ref SN8523117197) in an adjacent field (Target Note 4, Figure 1) and the landowner reports seeing both fox and badger crossing the site of the proposed extension. There are also known setts to the south of the existing WTW (approx. 250m), although this is on the opposite side of the river. It is likely, therefore, that the proposed site forms a small part of a wider badger territory and the loss of this small area of grassland should not have a significant impact. As a precaution an egress should be left in all excavations left over night during the construction period to ensure badgers do not become trapped.

No signs of water vole were found during the survey. An otter spraint was found on a boulder under the bridge at the site entrance but no holts or resting places were observed. CCW report that otter and water vole are present on the River Tawe. The Nant Tywynni flows into the Tawe approximately 100m downstream and, while there would be no direct impact on these species, pollution control must be implemented to ensure no impact on water quality.

There is a hedgerow along the disused road but this will be retained as part of the scheme. There may be need for some tree removal along the stream if a new pipeline crossing is required. This would not have a significant impact on the nature conservation value of the watercourse but the trees will provide potential habitat for a range of passerine birds. If any

trees or scrub clearance is to be carried out during the bird breeding season (March-July) then these should be declared free from nesting birds by an ecologist prior to removal. No trees with the potential for bats will be affected by the proposed works (see Target Note 2, Figure 1). All habitat removed should be mitigated by additional landscape planting using species typical of the area (e.g. oak, ash, alder, hazel and hawthorn). All vegetation to be retained should be fenced off during construction.

There is an historic record (2003) of a red kite nesting at Doderi on the opposite site of the A4067. Red kites are also known to roost near Ynyswen, about 5km south of Crai WTW. There has been a barn owl sighting (1991) in the local area but no suitable nest sites were found during the survey. The proposed extension site does not provide good habitat for either species as it is too closely grazed to provide habitat for small mammals. However, a good enhancement measure could be to erect a barn owl box on the edge of the new site. The Brecon Beacons National Park Barn Owl Conservation Project should be consulted whether this would be a valuable measure at this site and also on the design and positioning of the box.

During the original survey reptile fencing was noted to the south of the scheme for an unrelated pipeline project. However, the proposed WTW site has very low potential for reptiles. Better quality habitat in the local area is to the south west of the site, where there are areas of marshy grassland, open land and dry stone walls. As these areas are not to be impacted during construction, no significant impact on reptiles is envisaged.

No great crested newt (GCN) records have been found for the local area and the presence of GCN has not been highlighted by CCW or any other consultees. There are two ponds within 250m of the WTW site. No access has been obtained in order to inspect the ponds for their suitability for GCN but as the proposed scheme will be on the opposite side of the stream and the habitat affected is of very low value to GCN no significant impact on GCN or other amphibians is expected. If, however, GCN are found during construction, work should stop and CCW contacted.

Noise, Air Quality, Traffic.

There will be increased noise and pollution during the construction phase due to increased construction traffic and construction of the WTW. Access to the site will be via the A4067. There will be minimal disruption to residential areas due to the predominantly rural setting of the WTW. There may be some construction works within the access track to Glan Tywyni Farm (the Danone plant) and access will need to be maintained at all times. This is the property also at most risk of construction disturbance and liaison should be undertaken with the owner/managers over the nature and programme of works.

There would be only very minor increased traffic movements during the operational phase. Depending on the option selected there could be an increase in the number of chemical deliveries per year, either through higher usage of existing chemicals (Hypochlorite) or through the use of new chemicals (sulphuric acid/flocculation aid-polymers). This extra chemical delivery, however, would only result in a worst case scenario of an additional every 16 days.

Depending on the final Crai process design it is anticipated that most operational noise would come from possible air blowers (which can be partially-silenced). However, experience from

an existing rural WTW at Velindre, which has 8 times the water-flow capacity of Crai has found that the blowers there do not cause a concern. It is also intended to carry out some noise measurements at Velindre and this could be used to set targets for the Crai scheme. A generator used at the Danone plant already causes background noise and any possibility of a partnership to provide mainline electricity to the plant would be of benefit.

No specific odour sources have been identified.

Recreation and Amenity

A public footpath and a bridleway run close to the proposed site. The footpath starts at the entrance to the access road to the existing WTW. Although not directly affected the road will be subject to increased traffic movements during construction and a risk assessment and mitigation should be undertaken accordingly. The bridleway crosses the field to the north east of the construction site but its route is not obvious on site and it does not appear well used. The works will not disrupt the bridleway but may cause minor temporary disturbance to users from increased noise during construction.

Visual Impact

The site is within The Brecon Beacons National Park and, therefore, the design of the works should be sensitive to its setting in a high quality landscape area.

The new site is in a hollow, beneath the embankment of the A4067 and is not visible from cars but can be viewed from standing on the road verge. No residential properties overlook the proposed site. Generally, the site is well screened by the trees along the stream and around the existing WTW. There are more distant views from the hills around but the new site will be adjacent to the Danone plant and the existing WTW. Additional landscape planting will be required, especially along the north east boundary and along the disused road. Additional planting should be appropriate to the natural setting of the scheme and use species characteristic of the area (see above). Overall, therefore, there should be no significant impact on the landscape character and quality of the area.

Archaeology

No known archaeological interest occurs within the proposed site. The nearest known archaeological sites highlighted by the Clwyd-Powys Archaeological Trust (CPAT) are over 200m to the south of the site (including a post medieval mounting stone and Maes-yr-eglwys farmstead and pond). These will not be affected by the proposed works. However, as there is high potential for archaeological features spanning the pre-historic through to post medieval periods in this region, CPAT have advised that the proposed scheme should be subject to a multi-staged archaeological assessment. CPAT should, therefore, be provided with the scheme drawings and an archaeological assessment strategy agreed.

Water

The Environment Agency encourages the use of Sustainable Urban Drainage Systems (SUDs) and these should be incorporated into the design if possible. The Environment Agency objects to any development that generates flows greater than Greenfield run-off and there may be a requirement for regulation of surface water flows. Land Drainage Consent

may be required for any works within, under, over or within 7m of the watercourse. The development will be subject to the provisions of Technical Advice Note 15 (TAN 15): Development and Flood Risk (July 2004). The Environment Agency's pollution prevention guidelines will need to be followed carefully due to the proximity of the works to Nant Tywynni.

Further Survey

Due to the known presence of badgers and otters in the area a pre-construction check is recommended to ensure no setts or holts/resting places are established in the interim period. A pre-construction check should be made to confirm the extent of the Japanese knotweed. An archaeological assessment is also required.

Conclusion

The proposed site is within the Brecon Beacons National Park and, therefore, will need to be sympathetically designed and screened to ensure no significant impact on the landscape quality of the area. However, the proposed works are situated in a well screened site, in a valley bottom. The site is also adjacent to an existing WTW and a Danone plant so this location will mean that all the local development is clustered in one location. With additional landscape planting the extension should not have a significant impact on the landscape quality of the Brecon Beacons.

The proposed site is within an agricultural field of low value for nature conservation. The adjacent stream is more ecologically sensitive and good working practice will need to be followed to minimise vegetation clearance and prevent pollution. The Environment Agency will need to be consulted on the timing of the river crossing and if possible no dig technology should be used. No protected species should be significantly affected by the proposals.

Environment Agency Guidelines for the removal, control and disposal of Japanese knotweed will need to be followed if works are proposed within 7m of infested areas.

It is envisaged that there will be little impact to the local community. The main impact would be from increased construction traffic and noise during the construction period. The nearest residence is approx. 200m from the main proposed site but this is small industrial plant (Danone). Access to this private property will need to be maintained during the works.

Access to public rights of way should be safely maintained if possible or temporary closures obtained from the National Park footpaths officer.

Details of the scheme will need to be supplied to CPAT so an archaeological assessment and mitigation strategy can be agreed.