

Caulmert Limited

**Engineering, Environmental & Planning
Consultancy Services**

DWR CYMRU WELSH WATER

**PROPOSED DEVELOPMENT OF AN ADVANCED ANAEROBIC
DIGESTION PLANT**

FIVE FORDS WASTEWATER TREATMENT WORKS, WREXHAM.

SUPPORTING PLANNING STATEMENT

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TABLE OF CONTENTS

1	INTRODUCTION
2	DESCRIPTION OF THE APPLICATION SITE
3	THE PROPOSED DEVELOPMENT
4	THE DEVELOPMENT PLAN AND OTHER MATERIAL CONSIDERATIONS
5	REVIEW OF THE PLANNING ISSUES
6	CONCLUSIONS

1. INTRODUCTION

- 1.1 Caulmert Ltd has been appointed by Mott MacDonald Bentley, capital delivery partner acting on behalf of Dwr Cymru Welsh Water (DCWW) and the Capital Delivery Alliance, to prepare this Supporting Planning Statement.
- 1.2 The Statement relates to an application for full planning permission for the proposed development of an Advanced Anaerobic Digestion (AAD) Plant, together with associated internal site access roads and landscaping at Five Fords Wastewater Treatment Works (WwTW), Wrexham.
- 1.3 The planning application for the proposed development is accompanied by, inter alia, a Landscape and Visual Impact Assessment, a Preliminary Ecological Appraisal, a Great Crested Newt Survey Report, an Archaeological Desk Based Assessment, a Noise Assessment, a Traffic Statement, a Sustainability Assessment and a Drainage Assessment. These specialist reports indicate that the environmental effects of the proposed development, if any, are likely to be of a minor nature only and can be mitigated satisfactorily.
- 1.4 The proposed development falls within Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2016 and a formal Screening Opinion was requested from Wrexham County Borough Council, as Local Planning Authority.
- 1.5 The Local Planning Authority adopted a Screening Opinion on 1st April 2016 (Ref: SO/2016/007), concluding that the proposed development did not constitute EIA development as *“no significant environmental impacts of more than local importance are identified that would justify a decision to require an Environmental Impact Assessment.”*

2. DESCRIPTION OF THE APPLICATION SITE

- 2.1 Five Fords WwTW is situated approximately 3.5km to the south east of Wrexham Town Centre and extends to approximately 23ha.
- 2.2 The WwTW site is enclosed within a security fence and contains a series of tanks, some of which are up to 22m in height, together with other substantial buildings and structures.
- 2.3 Cefn Road passes to the north of the WwTW on a generally east – west alignment. Vehicular access to the WwTW site is gained from Cefn Road, via an existing L-shaped private access road which is currently in the process of being upgraded.
- 2.4 The site of the proposed AAD Plant (“the application site”) is located at the eastern fringe of the WwTW.
- 2.5 The western part of the application site is currently occupied by an existing sludge cake building and liming plant, together with a number of both operational and disused tanks.
- 2.6 The eastern part of the application site has been used, in recent years, as a temporary construction compound in connection with various improvement projects undertaken at the WwTW. This part of the application site is currently vacant and comprises areas of hardstanding which have been re-colonised, in part, by thistles and weeds.
- 2.7 The eastern part of the application site benefits from a wider planning permission which was granted in December 2014 for the erection of solar panels on land to the east and north of the WwTW (Planning permission ref: MAR P/2014/0700). This consent has not been implemented on the application site.
- 2.8 The land to the east and north of the application site is occupied by a solar array, which were approved in 2014 as part of the above-mentioned consent.
- 2.9 Immediately to the east of the solar arrays, the land is in agricultural use. Further to the east, a recently constructed link road runs between Five Fords Bridge and the A525 at Cross Lanes, providing vehicular access to Wrexham Industrial Estate from the south.
- 2.10 To the north of the solar array, the Afon Clywedog follows a meandering course, with Cefn Road beyond. Wrexham Industrial Estate is located approximately 800m to the north of the application site and contains numerous large industrial and commercial buildings.
- 2.11 The application site is bounded on its western side by Marchwiell Covert, an area of ancient woodland, with process tanks and other wastewater treatment plant and equipment situated further to the west and to the north west.
- 2.12 A sewage sludge digestion and sustainable energy generation plant is located immediately to the south of the application site. This plant includes two digestion tanks, which are both more than 22m in height, and a sustainable energy plant.

- 2.13 To the south of the sludge digestion plant, a disused railway line runs on a generally north west-south east alignment, with the village of Marchwiel beyond the disused railway line to the south west.
- 2.14 A public footpath runs along the disused railway line and in a northerly direction from the disused railway line to join the existing WwTW access road to the east of the solar array, before turning sharply eastwards towards the new Industrial Estate Access Road.

3 THE PROPOSED DEVELOPMENT

- 3.1 Planning permission was granted on 8th March 2010 for the development of the sludge treatment digestion and sustainable energy plant on land immediately to the south of the application site (Planning Permission Ref: P/2010/0012).
- 3.2 The sludge treatment digester and sustainable energy plant became operational in 2012 and treats and digests sewage sludge from Five Fords WwTW and from other WwTW in North Wales.
- 3.3 The treated sludge, following digestion, is then recycled to farmland as a high-value and sustainable fertiliser.
- 3.4 The digestion process produces a biogas which is used to generate electricity on site and/or is injected into the National gas grid.
- 3.5 Since the existing sludge treatment digestion and sustainable energy plant became operational, new advanced anaerobic digestion (AAD) technologies, involving thermal hydrolysis, have become well established and enable the overall digestion process to operate more efficiently producing increased volumes of biogas and an improved fertiliser.
- 3.6 It is now proposed to install an AAD plant at Five Fords WwTW in order to complement the operation and enhance the efficiency of the existing sludge treatment digestion process.
- 3.7 The additional biogas that would be produced as a result of the proposed development will be injected into the National gas grid thereby enhancing the sustainable energy balance of the WwTW site.
- 3.8 It is proposed to locate the proposed AAD plant immediately adjacent to the existing sludge treatment digestion and sustainable energy plant, partly within within the existing operational area of the WwTW and with the balance extending onto the adjacent former construction compound site.
- 3.9 This location was selected in view of the mutual interdependence of the two processes, the focus of sludge treatment facilities on this part of the WwTW site, the brownfield status of the site and the limited intrusion beyond the existing operational area that would be required.
- 3.10 In the event that planning permission is granted for the proposed AAD plant development, DCWW acknowledges that implementation would preclude the previously approved installation of solar panels on the former construction compound site.
- 3.11 The proposed AAD plant development would involve the following principal elements:
- The demolition of four existing sludge holding tanks and extension to the existing cake building;
 - A liquor treatment plant;
 - A pre- THP centrifuge buffer tank;

- Thermal hydrolysis (THP) feed silos;
- Internal site access road;
- Relocated site entrance gate; and,
- Screening bund.

- 3.12 In addition, a number of small GRP control kiosks and odour control units are proposed.
- 3.13 The tallest structures that are proposed are the THP feed silos (16m) and the pre-centrifuge buffer tank (14.7m). The height of these structures are well below that of the existing digesters (22m).
- 3.14 The proposed development is well screened in public views from the north, west and south by existing vegetation. From the east, public views of the proposed development will be available from the footpath that runs between the former railway line and the WWTW site access road and from the recently completed Wrexham Industrial Estate link road.
- 3.15 In order to limit the visual impact of the proposed development from these viewpoints, the larger structures have, insofar as operationally practicable, been located close to the existing digesters and with the well-established Marchwiell Covert as a backcloth. In addition, tanks have been sited on an east- west alignment and in close proximity to existing structures so that the tank to the rear is partially screened.
- 3.16 A screening bund will also be provided along the eastern boundary of the proposed development.
- 3.17 The colours of the proposed structures have been selected to match existing buildings and also to appear recessive in the landscape, especially when viewed with Marchwiell Covert as a backcloth.
- 3.18 Odour control measures will be included as part of the proposed development and will serve to mitigate any potential impact to the local community.
- 3.19 It is anticipated that, in operation, the proposed development will generate approximately 8 additional tanker movements each day, together with approximately 13 additional trailer movements, distributing the treated sludge to agricultural land.
- 3.20 The existing site WwTW site access road and its junction with Cefn Road are in the process of being improved, in accordance with current highway standards, and both the improved junction and the surrounding highway network can safely accommodate this small increase in traffic movements

4 THE DEVELOPMENT PLAN AND OTHER MATERIAL CONSIDERATIONS

The Development Plan

- 4.1 The statutory Development Plan for the area within which the application site is located comprises the Wrexham Unitary Development Plan 1996 – 2011 (“the UDP”), which was adopted in February 2005.
- 4.2 The site of the proposed AAD Plant is unallocated on the Local Plan Proposals Map and is located in “open countryside” outside the defined settlement boundaries.
- 4.3 Strategic Policy PS2 requires that development must not materially detrimentally affect countryside, landscape/townscape character, open space or the quality of the natural environment.
- 4.4 Strategic Policy PS3 seeks to direct development to previously used brownfield land comprising vacant, derelict or underused land in preference to the use of greenfield land wherever possible.
- 4.5 Strategic Policy PS12 confirms that proposals for the generation of energy from renewable sources will be supported, provided that the wider environmental benefits are not outweighed by any detrimental impacts of the proposed development.
- 4.6 Environment and Conservation Policy EC4 confirms that development proposals should provide for the conservation and management of hedgerows, trees, orchards, woodland, wildlife and other natural landscape and water features, and include new planting in order to enhance the character of the landscape and townscape.

Planning Policy Wales

- 4.7 Planning Policy Wales (Edition 8) (“PPW”) was updated most recently in January 2016 and sets out the land use planning policies of the Wales Government.
- 4.8 PPW confirms that there should be a presumption in favour of sustainable development promoting sustainable development, in taking decisions on individual planning applications, in order to ensure that social, economic and environmental issues are balanced and integrated.
- 4.9 Where Development Plan policies are either outdated or superseded, PPW advises that there should be a presumption in favour of proposals in accordance with key principles and policy objectives which seek, inter alia, to:
“Support the need to tackle the causes of climate change by moving towards a low carbon economy. This includes facilitating development that reduces emissions of greenhouse gases in a sustainable manner, provides for renewable and low carbon energy sources at all scales and facilitates low and zero carbon developments”.
- 4.10 PPW confirms that *“tackling climate change is a fundamental part of delivering sustainable development. Climate change is one of the most important challenges facing*

the world and the Welsh Government has made a commitment to tackling climate change, resolving that the Government and people of Wales will play the fullest possible part in reducing its carbon footprint”.

- 4.11 PPW also seeks to afford priority to the development of brownfield, previously developed land rather than greenfield sites.
- 4.12 PPW advises that local planning authorities should facilitate the development of all forms of renewable and low carbon energy to move towards a low carbon economy to help to tackle the causes of climate change. In determining planning applications for renewable and low carbon energy development and associated infrastructure, local planning authorities are required to take into account, inter alia:
- The wider environmental, social and economic benefits and opportunities from renewable and low carbon energy development;
 - The impact on the natural heritage and the Historic Environment;
 - The need to minimise impacts on local communities to safeguard quality of life for existing and future generations;
 - Ways to avoid, mitigate or compensate identified adverse impacts;
 - Grid connection issues where renewable (electricity) energy developments are proposed; and
 - The capacity of and effects on the transportation network relating to the construction and operation of the proposal.

5. REVIEW OF THE PLANNING ISSUES

- 5.1 The principle of the proposed development is fully supported by the provisions of Planning Policy Wales 8, which seek to promote renewable energy as part of the Welsh Government's overarching objectives regarding sustainability and climate change, and by Policy PS12 of the UDP.
- 5.2 At the local level, the site of the proposed AAD Plant is located in open countryside, outside of the existing settlement boundaries as defined on the UDP proposals map. Whilst UDP policies do not preclude development outside of the settlement boundaries, the environmental and amenity implications of such developments are an important consideration.
- 5.3 The application site is not located in an area of special landscape value and the Landscape and Visual Impact Assessment, submitted as part of this planning application, demonstrates that the overall impact of the proposed solar array on both landscape character and visual amenity will be minor or negligible. Thus, the proposed development accords with the requirements of UDP Policy PS2.
- 5.4 The application site comprises previously developed land which is presently used for wastewater treatment operations or has been used, until recently, as a construction compound. Both PPW and UDP Policy PS3 seeks to direct development to previously developed land of this nature.
- 5.5 The proposed development will not result in the loss of any existing trees and hedgerows and includes the provision of a new screening bund. The Preliminary Ecological Appraisal, submitted as part of this planning application demonstrates that the proposed development will have no material adverse impacts on interests of nature conservation importance and is supportive of the requirements of UDP Policy EC4.
- 5.6 In operation, the proposed AAD plant will not result in noise or other disamenity. The slight increase in operational traffic movements associated with the proposed development are not considered to be significant for either road safety or highway capacity.
- 5.7 The site of the proposed AAD Plant is not within a flood zone. The proposed development will have a secure drainage system which will pass incident rainfall through the WwTW. Thus surface water drainage from the application site will not cause an increase in flood risk arising from the Afon Clywedog.
- 5.8 There are no listed buildings, scheduled ancient monuments or conservation areas in the immediate vicinity of the application site.
- 5.9 An archaeological assessment of the application site has been undertaken and has concluded that there is a no potential for buried archaeological remains prior to the medieval period and that any medieval or post-medieval remains would be agricultural in nature and of low value.

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- 5.10 PPW is very supportive of sustainable development proposals and, in particular, of renewable energy projects that will help tackle climate change.
- 5.11 PPW identifies a series of matters that local planning authorities are required to take into account in determining planning applications for renewable and low carbon energy development. These considerations are addressed, in turn, below.
- 5.12 The Sustainability Report, submitted as part of this planning application, demonstrates that the proposed development is in line with Wrexham County Borough Council's sustainability requirements and will result in wider environmental, social and economic benefit.
- 5.13 The submitted Preliminary Ecological Appraisal and Archaeological Assessment demonstrate that the proposed development will not have an adverse impact on the proposed natural heritage and the Historic Environment.
- 5.14 The submitted Noise Assessment demonstrates that the proposed development will not have an adverse impact on local communities, whilst the adoption of measures to reduce climate change will help to safeguard the quality of life for existing and future generations.
- 5.15 The biogas generated by the proposed development will be injected directly into the National gas grid thereby enhancing the sustainable energy balance of the WwTW site. Facilities are already available on the WwTW site for the direct injection of biogas into the gas grid.
- 5.16 The existing WwTW access road is currently being improved and will provide safe access to the highway network. In view of the slight increase only in operational traffic movements, as a result of the proposed development, there will be no significant capacity implications for the surrounding highway network.
- 5.17 Thus, the proposed AAD Plant satisfies the considerations that PPW requires be taken into account in determining planning applications for renewable energy projects.

6. CONCLUSIONS

- 6.1 The proposed AAD Plant will facilitate the generation of renewable energy and will make a positive contribution towards the reduction of climate change.
- 6.2 The development is fully in accordance with the provisions of Planning Policy Wales and the statutory Development Plan for the area.
- 6.3 The proposed development will not result in any material harm to interests of acknowledged importance and all potential adverse impacts will be fully mitigated.
- 6.4 The local planning authority is requested, therefore, to grant planning permission for the proposed development of an Advanced Anaerobic Digestion Plant, together with associated internal site access roads and landscaping at Five Fords Wastewater Treatment Works, Wrexham.

