



Merthyr Tydfil County Borough
Council
Planning Department
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Our Ref: AM/26D-15075 (BR13)
Your Ref: P/24/0196
Date: 22 August 2024
Contact: Station Manager A. Macarthy
Tel: 07876 391299
E-mail: firesafety@southwales-fire.gov.uk

Dear Sir/Madam,

**TOWN AND COUNTRY PLANNING ACT 1990
PROPOSAL: ERECTION OF HYDROGEN ELECTROLYSER PLANT FACILITY (8
MEGAWATTS) INCLUDING ASSOCIATED STORAGE CONTAINERS, SUPPORT
INFRASTRUCTURE, CCTV, SECURITY FENCE AND LANDSCAPING
LOCATION: LAND AT PENGARNDDU INDUSTRIAL ESTATE DOWLAIS
MERTHYR TYDFIL**

I acknowledge receipt of the notification to the South Wales Fire and Rescue Authority ("The Authority") in relation to the above application.

The proposed site plan in relation to the above has been examined and The Authority wish the following comments to be brought to the attention of the committee/applicant. It is important that these matters are dealt with in the early stages of any proposed development.

Changes to our climate and weather patterns will have a significant impact on the well-being of both current and future generations. In line with the **Well-being of Future Generations (Wales) Act 2015** and the **Future Wales – the national plan 2040** framework document, the following areas should be considered early in the planning process:

The climate emergency is likely to increase the risk of flooding as a result of sea-level rises, more frequent severe weather systems and more intense rainfall. Planning authorities should adopt a precautionary approach of positive avoidance of building developments in areas of flooding from the sea or from rivers. Surface water flooding will affect the choice of location and the layout and design of schemes and these factors should be considered at an early stage in formulating any development proposals.

Wildfires are a significant potential threat particularly in populated areas adjoining green spaces such as mountains or forestry. Therefore, it is critical that new developments are designed with this in mind. Where a new development is proposed in an area which is at risk of a wildfire, consideration should be given on how to mitigate the spread of wildfires. For example, sustainable land management could assist with prevention measures.

Large Commercial Solar Arrays, Battery Energy storage Facilities, Electric Vehicle Parking/Charging Facilities:

Fires involving the installations detailed above can be very difficult to extinguish. Conditions can cause a thermal runaway within battery cells, which is a highly exothermic reaction creating toxic, flammable, and/or explosive chemical atmospheres.

The developer of such sites should ensure they have suitable safety measures to contain and restrict the spread of fire, using fire-resistant materials and adequate separation between locations where energy systems may be stored.

Active fire safety systems should be incorporated into the design if necessary and may include, automatic fire detection systems, automatic fire suppression and smoke control systems.

The Authority recognises that the charging of electric vehicles and the use of batteries (including lithium-ion) as Energy Storage Systems (ESS) is a new and emerging practice in the global renewable energy sector. As with all new and emerging practices within UK industry, developers should consider the risks associated with such systems early in the design stage of the project.

Standing Advice.

The site plan/s of the above proposal has been examined and The Authority would wish the following comments to be brought to the attention of the planning committee/applicant. It is important that these matters are dealt with early on in any proposed development:

- The Fire Authority has no objection to the proposed development and refers the Local Planning Authority to any current standing advice by the Fire Authority about the consultation.

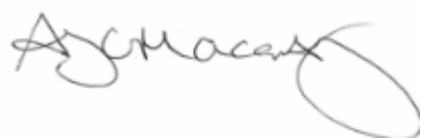
The developer should also consider the need for the provision of:-

- a. adequate water supplies on the site for firefighting purposes; and
- b. access for emergency firefighting appliances

Should the applicant require further information in relation to these matters they should contact the above named fire safety officer.

Yours faithfully,

Duly signed and authorised by

A handwritten signature in black ink, appearing to read 'A. Macan', with a large, stylized loop at the end.

for Assistant Chief Fire Officer

cc: WATERGEN@southwales-fire.gov.uk

Enc: BR13 Appendix

Appendix

1.0 Access For Fire Appliances

Typical vehicle access route requirements:

Appliance Type	Min Width Road	Min Width Gate	Min Turning Circle between Kerb
Pump	3.7m	3.1m	16.8m
Aerial Appliance	3.7m	3.1m	26.9m

Min Turning between Wall	Min Height Clearance	Min Capacity Tonnes
19.2	3.7m	14
29.0	4.0m	23

Pedestrian Priority

Pedestrian schemes must take into account the need for permanent and unobstructed access for firefighting appliances. The siting of ornamental structures such as flower beds, must take account, not only of the access requirements of the fire appliances but the need to be able to site them in strategic positions; in particular, account must be taken of the working space requirements for aerial appliances. Consultation must take place with the Fire and Rescue Authority during the earliest planning stages of any development to ensure adequate access for fire appliances, their siting and use.

2.0 Water Supplies for Firefighting

The existing output of the statutory water supply network may need to be upgraded in certain parts of the local plan area to cater for firefighting needs of new developments. It is recommended that this provision be a condition of planning consent.

Access to Open Water Supplies

Where development of water front sites takes place, the need for permanent and unobstructed access for firefighting appliances to the water should be made a condition of any planning consent.

Consultation must take place with the Fire and Rescue Authority during the earliest planning stages of any development to ensure access for fire pumping appliances is satisfactory.

2.1 Housing

Minimum main size 100mm. Housing developments with units of detached or semi-detached houses of not more than two floors should have a water supply capable of delivering a minimum of eight litres per second through any hydrant on the development.

Housing developments with units of more than two floors should have a water supply capable of delivering a minimum of 20 to 35 litres per second through any hydrant on the development.

2.2 Transportation

Lorry/Coach Parks - Multi-Storey Car Parks-Service Stations

Minimum main size 100mm. All of these amenities should have a water supply capable of delivering a minimum of 25 litres per second through any hydrant on the development or within a vehicular distance of 90 metres from the complex.

2.3 Industry

In order that an adequate supply of water is available for use by the Fire and Rescue Authority in case of fire, it is recommended that the water supply infrastructure to any Industrial estate is as follows:

Light Industrial

Minimum Main Size 100mm
Up to one hectare, 20 litres per second

Commercial/Industrial

Up to two hectares, 35 litres per second - Minimum Main Size 150mm

High Risk Industrial

Two to three hectares 50 litres per second - Minimum Main Size 150mm.
Over three hectares, 75 litres per second.

In rural areas it may not be possible to provide sufficient mains water. To overcome this, static or river supplies would be considered on site at the above flow rates for at least one hour.

The Fire and Rescue Authority should be consulted at the outline planning stage of any proposed projects to ascertain the exact requirements, as high risk units may require a greater flow.

2.4 Shopping, Health and Community Facilities

Village Halls

Should have a water supply capable of delivering a minimum of 15 litres per second through any hydrant on the development or within a vehicular distance of 100 metres from the complex.

Primary Schools and single storey Health Centres

Should have a water supply capable of delivering a minimum of 20 litres per second through any hydrant on the development or within a vehicular distance of 70 metres from the complex.

Secondary Schools, Colleges, Large Health and Community Facilities

Should have a water supply capable of delivering a minimum of 35 litres per second through any hydrant on the development or within a vehicular distance of 70 metres from the complex.

2.6 Distances Between Fire Hydrants

The distance between fire hydrants should not exceed the following:

Residential areas	-	200 metres
Industrial Estates (Subject to operational needs)	-	150 metres
Town centre areas	-	90 metres
Commercial (Offices & Shops)	-	100 metres
Residential Hotels	-	Adjacent to access
Hotels	-	Adjacent to access
Institutional (Hospitals & Old Persons Homes)	-	Adjacent to access
Old Persons Homes	-	Adjacent to access
Educational (Schools & Colleges)	-	Adjacent to access

2.7 Conclusion

Developers should hold joint discussion with Dwr Cymru - Welsh Water or the National Rivers Authority and the Fire and Rescue Authority to ensure that adequate water supplies are available in case of fire. The Fire and Rescue Authority reserve the right to ask for static water supplies for firefighting on site as a condition of planning consent, if the supply infrastructure is inadequate for any given risk.