Planning Application for the construction of a Green Hydrogen Electrolyser, associated infrastructure and change to Public Right of Way at Kimberly Clark Coleshill Mill, Flint.

Planning, Design and Access Statement.

On behalf of HYRO Energy Ltd.

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Contents

1. Introduction

1.1. This Planning, Design and Access Statement has been prepared by Pegasus Group on behalf of HYRO Energy Ltd. (the "Applicant") and accompanies and supports a full planning application for the construction of a Green Hydrogen Electrolyser, associated infrastructure and change to Public Right of Way (the "Proposed Development").

1.2. The purpose of this report is to assess the proposed development and its acceptability in planning terms, with regard to the adopted Development Plan and any other pertinent material considerations to the determination of the application.

1.3. The report takes the following structure:

- **Introduction** – provides the introductory context to the statement;
- **The Application Site** – presents a detailed description of the application site, its wider context and planning history;
- **The Proposed Development** – provides a description of the proposed development, the wider Green Hydrogen context and provides the Design and Access Statement;
- **Planning Policy Context** – sets out the planning policies and guidance documents relevant to the proposed development;
- **Assessment of Proposed Development** – assesses the proposed development against the relevant planning policies and other material considerations;
- **Conclusion** – provides the concluding remarks of the statement.

2. The Application Site

2.1. This chapter of the statement provides details of the application site, its wider context and planning history.

The Application Site

2.2. The application site relates to approximately 4.3 hectares of land located immediately to the southwest of the Kimberly Clark Coleshill mill in Flint. The submitted Site Location Plan details the full extent of the application site for planning purposes.

2.3. The application site is located outside of the development limits of Flint and is within a minerals safeguarding area, according to the adopted Policies Map. Figure 1 below shows the approximate location of the application site within the context of the Policies Map.

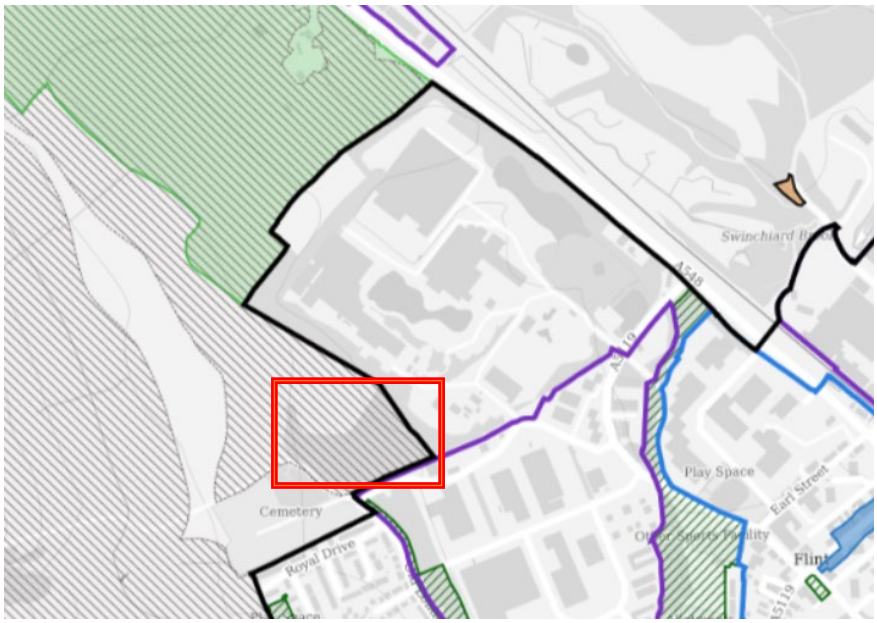

Figure 1: Location of site within Policies Map.

2.4. The site is not located within a conservation area and contains no listed buildings, nor is it within the setting of a conservation area or any listed buildings.

2.5. The site is located entirely within the lowest-risk river flood zone according to the Welsh Government's flood risk mapping. The site has low risk of flooding from rivers or the sea, however there are pockets of land close to the site which may be susceptible to surface area flooding. A Flood Risk and Drainage Assessment has been undertaken and forms part of the application submission.

2.6. According to the Welsh Government Development Advice Map, the site does not sit within any identified flood risk zones. Figure 2 below highlights the location of the site in relation to the flood risk zones in Flint, denoted with a red box.

Figure 2: Development Advice Map extract.

3. The Proposed Development

3.1. The proposals consist of the construction and operation of a 7.5MW Green Hydrogen Electrolyser (GHE) facility, associated infrastructure and change to Public Right of Way to the south of the Kimberly Clark Coleshill paper mill in Flint, CH6 5EX.

3.2. 'Green Hydrogen' is one of many ways to produce hydrogen gas. 'Green' hydrogen uses electrolysis, passing electricity through water to separate the hydrogen and oxygen.

3.3. When compared to fossil fuels, Green Hydrogen is a much more sustainable and low-carbon option. Its use in this location will displace the need for natural gas to be used, reducing the carbon footprint of the factory.

3.4. The proposed GHE will consist of three containerized electrolysers (using Proton Exchange Membrane (PEM) technology) to produce up to 5.6 MW Higher Heating Value (HHV) of Hydrogen per hour.

3.5. Electrolysers are the primary component of green hydrogen production and comprise of several 'cells' which comprise two electrodes, one positively charged anode and one negatively charged cathode. The two electrodes are separated by an electrolyte, in this case a polymer (PEM). The electrolyte is responsible for transporting the electrical charge between electrodes, whereby hydrogen and oxygen are produced. The oxygen is then either vented into the atmosphere or captured and stored for commercial use.

3.6. The electrolysers incorporate water treatment plant, transformers and AC/DC rectifiers.

3.7. The water required for electrolysis needs to be cleaned and deionised during treatment regardless of its source to prevent damage to the equipment.

3.8. Additionally, the associated infrastructure will include eighteen storage tanks with compressors. Compressors are used to increase hydrogen pressure for storage purposes.

3.9. The proposals will also include a new onsite 11kV containerised substation and DNO substation.

3.10. The boiler house within the paper mill will be connected to the GHE by a new onsite hydrogen pipeline with gas regulators.

3.11. This development will fundamentally allow Kimberly Clark to decarbonise their operations at the Coleshill paper mill in Flint. The GHE being powered by green electricity itself will also aid this transition to carbon neutrality.

3.12. Furthermore, by installing a GHE at the Coleshill mill, Kimberly Clark are ensuring that their business will be resilient to rising energy costs and contribute to their own energy security. In turn, the business will be able to reinvest their saving on energy costs back into the business.

3.13. By using Green Hydrogen in place of gas for their industrial process, Kimberly Clark will be setting a standard across businesses in Flint, across Wales and the UK itself for using hydrogen as a sustainable and secure energy source.

3.14. An EIA Screening Request letter forms part of the application submission, and determines hat the proposed development should not constitute the need for an Environment Statement.

Green Hydrogen – A Wider Context

UK Hydrogen Strategy (August 2021)

3.15. Within the UK Hydrogen Strategy, the Government acknowledge that low carbon hydrogen will be **critical** for meeting the UK's legally binding commitment to achieve net zero by 2050.

3.16. It is predicted that by 2050, hydrogen could make up 20-35% of UK final energy consumption, indicating that the size of the hydrogen economy is forecast to grow. The government also acknowledges that growing the economy how essential growing the economy whilst cutting emissions is to meet legally binding climate commitments[1]

UK Hydrogen Strategy update to the market: December 2022

3.17. According to the December 2022 update to the market, the UK is aiming to remain at the centre of the economic growth in the hydrogen sector. The UK Government are continuing to focus on engagement with investors and industry to facilitate a flow of private sector capital into the hydrogen sector. Since the original Hydrogen Strategy was published, there has been a significant focus on driving private sector investment. The UK is well positioned to deliver the economic, social, and environmental benefits of hydrogen[2].

'Hydrogen in Wales' consultation

3.18. The 'Hydrogen in Wales' consultation was completed in June 2022, which highlighted a pathway and next steps for developing the hydrogen energy sector in Wales. The vast majority of respondents supported the concept of developing hydrogen energy in Wales. Furthermore, the Welsh Government highlight that hydrogen is a necessary part of achieving net zero, while also acknowledging that its low carbon hydrogen should be paired with other renewables for the future of Welsh energy security[3]

The Climate Change Act 2008 (2050 Target Amendment) Order 2019

3.19. This amendment to the Climate Change Act 2008 establishes that within Section 1(1), the commitment for the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline.[4]

The Environment (Wales) Act 2016 (Amendment of 2050 Emissions Target) Regulations 2021

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[1] https://www.gov.uk/government/publications/uk-hydrogen-strategy
[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1123751/hydrogen-strategy-update-to-the-market-december-2022.pdf
[3] https://www.gov.wales/developing-hydrogen-energy-sector-wales
[4] https://www.legislation.gov.uk/ukdsi/2019/9780111187654

3.20. This amendment to the Environment (Wales) Act 2016 establishes that within Section 29(1), Welsh Ministers must ensure that the net Welsh emissions account for the year 2050 is 100% lower than the 1990 baseline[5]

Sixth Carbon Budget (2020)

3.21. The Sixth Carbon Budget was produced by the Climate Change Committee and established the UK's path to Net Zero. The report acknowledged that the UK has experienced strains on its economy including Brexit and COVID-19, and stated that the UK Government needed to enshrine new climate commitments in law. Furthermore, the report highlights throughout that using hydrogen in industrial and transport settings is essential to decarbonise businesses.

3.22. As a result, the UK adopted the target to slash emissions by 78% by 2035 as per the Carbon Budget Order 2021[6].

Powering Up Britain (2023)

3.23. The most recent UK Government document on low-carbon and renewable energy stated that low carbon hydrogen is a critical component of the UK-wide strategy to deliver energy security. The ambition to deliver up to 10GW of low carbon hydrogen production capacity has been established and the Government has acknowledged the need to decouple emissions from economic growth[7].

3.24. As such, it is incredibly important for existing industry to explore low-carbon and renewable alternatives to power their operations.

Well-being of Future Generations (Wales) Act 2015

3.25. The Well-being of Future Generations (Wales) Act 2015 is in place to improve the social, economic, environmental, and cultural well-being of Wales. The Act aims to make public bodies such as Welsh Ministers, Local Authorities, the NHS, National Park Authorities and many other public bodies to think more about long-term solutions to contemporary issues that Wales faces.

3.26. The Act specifies seven well-being goals, which are:

- A globally responsible Wales
- A prosperous Wales
- A resilient Wales
- A healthier Wales
- A more equal Wales

[5] https://www.legislation.gov.uk/wsi/2021/333/regulation/2/made
[6] https://www.legislation.gov.uk/uksi/2021/750/article/2/made
[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147457/powering-up-britain-net-zero-growth-plan.pdf

- A Wales of cohesive communities
- A Wales of vibrant culture and thriving Welsh language

3.27. The Act places a duty that the public bodies will be legally expected to carry out, mainly that each public body must carry out sustainable development. Ultimately, this means that each public body listed in the Act must work to improve the economic, social, environmental, and cultural well-being of Wales[8].

3.28. Notably, the Welsh Government place an emphasis on acting on climate change within the guidance for understanding the Act.

Energy Wales: A Low Carbon Transition

3.29. The Welsh Government acknowledge that redesigning energy markets is essential to transition to a low carbon economy.

3.30. The ambition for a low carbon economy in Wales was established as being a widespread deployment of a diverse range of low carbon technologies which will help to generate low carbon electricity, thus allowing a steady decarbonisation of the energy supply in Wales[9].

Design and Access Statement

3.31. The following section details the design principles which have informed the layout of the proposed development. The scheme has been carefully designed to ensure that the proposals respond wholly to the context of the site. It must be acknowledged that the layout, scale and appearance of the proposal is very much reflective of the nature and use of the scheme and the individual elements that it comprises.

Layout

3.32. The final scheme as submitted is detailed upon the submitted plans. These plans outline the positions of the Green Hydrogen Electrolysers, containerised substation, storage tanks, compressors and other associated infrastructure.

Use

3.33. The proposed development will provide Kimberly Clark with Green Hydrogen to heat the boilers within the paper mill and thus decarbonise their industrial processes.

3.34. The on-site containerized storage will also prove useful to Kimberly Clark to store the energy created if a surplus is generated.

3.35. The location of the proposed development is essential for the energy created to be utilised by Kimberly Clark conveniently. Given the site itself is directly adjacent to the mill it will connect to, the development is logically placed.

[8] https://www.futuregenerations.wales/about-us/future-generations-act/
[9] https://www.gov.wales/sites/default/files/publications/2019-07/energy-wales-a-low-carbon-transition.pdf

Amount

3.36. The proposed development comprises a 7.5MW electrolyser system, water treatment plant, transformers, AC/DC rectifiers and eighteen storage tanks with four compressors. The boiler house within the paper mill will be connected to the GHE by a new onsite hydrogen pipeline with gas regulators.

3.37. The proposals will also include a new onsite 11kV containerised substation.

Scale

3.38. The scale of the development has been determined by the equipment necessary to power the current operations at the Kimberly Clark. The different components of the development have a maximum built height of 5.5m.

3.39. **Landscaping**

3.40. Fundamentally, the proposals nestle into the surrounding woodland and the adjacent factory itself. Cumulatively these will provide an immediate level of screening and visual incorporation to the surrounding area. The proposals include the provision of security fencing, which again is characteristic of the area.

Access

3.41. The primary construction and operational route will bring vehicles from Aber Road (to the south of the site), through some treed areas and into the main element of the scheme. Once the development is constructed this access will be used for the operation and maintenance of the proposed development. A Transport Statement has been prepared in support of this application which concluded that no upgrades to the existing Kimberley Clark site entrances are required.

4. Planning Policy Context

4.1. This chapter of the statement details the planning policies relevant to the planning application. National and local policy is established, along with specific energy and Green Hydrogen policy.

4.2. Earlier sections of this statement have set out the hierarchy of target setting legislation (to cut greenhouse gas emissions), relevant UK and Welsh Government hydrogen documents and also other relevant energy policies.

4.3. These are all material considerations in the determination of this application, with particular weight being given to the achievement of binding targets and the role of hydrogen production in achieving those targets.

Legislative Background

4.4. Section 38(6) of the Planning and Compulsory Purchase Act 2004 (as amended) requires that applications for planning permission must be determined in accordance with the adopted development plan unless material considerations indicate otherwise.

4.5. According to Section 38(6), for the purposes of any area in Wales, the development plan is:

a) The National Development Framework for Wales

b) Any strategic development plan for an area that includes all or part of that area, and

c) The local development plan for that area.

4.6. For the purposes of Section 38(6), the Flintshire Local Development Plan was adopted by the Council on the 24th January 2023 and covers the period 2015 to 2030. It forms part of the statutory development plan alongside Future Wales: The National Plan 2040. The remaining part of the statutory development plan will be the Strategic Development Plan for North Wales, once prepared and adopted.

4.7. As such, Flintshire County Council use the Local Development Plan and Future Wales as the primary basis for making decisions on planning applications and development proposals.

Future Wales: The National Plan 2040

4.8. Policy 1 specifies that the Welsh Government supports sustainable growth in all parts of Wales.

4.9. Policy 8 states that flood risk management is of a high priority in order to support sustainable strategic growth and regeneration.

4.10. Policy 9 highlights the importance of enhancing biodiversity, the resilience of ecosystems and the provision of green infrastructure.

4.11. Policy 17 states that the Welsh Government strongly supports the principle of developing renewable and low carbon energy from all technologies and at all scales to meet future energy needs.

Flintshire Local Development Plan 2015-2030

4.12. Policy STR4 establishes the principles of sustainable development, design and placemaking.

4.13. Policy STR7 states that the Plan will support Flintshire's role as a sub-regional economic hub.

4.14. Policy STR13 highlights that development should identify, respect, protect, enhance and connect Flintshire's environmental assets, to create a multifunctional network of natural and historic resources.

4.15. Policy STR14 highlights that the Council will seek to mitigate the effects of climate change and ensure appropriate environmental protection in the County, including encouraging energy efficient development, environmentally acceptable renewable and zero / low carbon energy generation and combined heat and power and communal / district heating networks.

4.16. Policy STR16 establishes how Flintshire's important mineral resources will be sustainably managed.

4.17. Policy PC1 highlights that outside of settlement boundaries, new development will be permitted for development which is appropriate to the open countryside and where it is essential to have an open countryside location, rather than being sited elsewhere.

4.18. Policy PC2 states that all development should be in keeping with the character, local distinctiveness, and landscape of the area. Development should not have a significant adverse impact on the safety and living conditions of nearby residents, not have an unacceptable effect on the highway network and not result in or be susceptible to problems related to foul and surface water drainage, land stability, contamination, flooding, or pollution of light, air and water.

4.19. Policy PC3 highlights that all new development should be of a high quality design, retain existing landscape and nature conservation features and incorporate opportunities to enhance biodiversity and ecological connectivity.

4.20. Policy PC4 states that development should be designed so as to be resilient and adaptable to the effects of climate change and incorporate renewable energy technologies.

4.21. Policy EN4 states that new development, either individually or cumulatively, must not have a significant adverse impact on the character and appearance of the landscape. Landscaping and other mitigation measures should seek to reduce landscape impact and where possible bring about enhancement.

4.22. Policy EN7 states that development proposals that will result in significant loss of, or harm to, trees, woodlands or hedgerows of biodiversity, historic and amenity value will not be permitted.

4.23. Policy EN14 highlights that development will not be permitted in areas at risk of fluvial, pluvial coastal and reservoir flooding; where it would lead to an increase in the risk of flooding on the site; where it would have a detrimental effect on existing flood risk management assets or where it would impede access to existing and proposed flood management assets for maintenance and emergency purposes.

4.24. Policy EN18 states that new development which is sensitive to the effects of existing noise, vibration, odour, dust, light or other pollution or nuisance will be permitted only if appropriate mitigation measures can be demonstrated.

4.25. Policy EN23 states that non-mineral development within Mineral Safeguarding Area as defined on the proposals map will only be permitted where it can be demonstrated the mineral underlying the site does not merit extraction.

5. Assessment of Proposed Development

5.1. The following section of this report assesses the development proposals against the policies of the Development Plan and the national plan for Wales. It is considered that the key issues in the determination of the application are the principle of development, the impact upon landscape, amenity, and biodiversity.

General Principle of Development

5.2. This application seeks permission for a Green Hydrogen Electrolyser, associated infrastructure and change to Public Right of Way at Kimblerly Clark Coleshill mill, Flint.

5.3. It is evident that in principle the proposal draws considerable support from the myriad of documents relating to combatting climate change, legally binding greenhouse gas emission targets for net zero and governmental support for hydrogen production (including the setting of a 10GW target) for economic as well as climate change reasons. Nonetheless, whilst the scheme draws significant support from this hierarchy, this does not override the need to demonstrate the acceptability of the proposal at the local level. This statement, as part of the wider application, demonstrates this acceptability.

5.4. Policy STR14 of the Flintshire Local Development Plan clearly advocates for the implementation of zero/low-carbon energy generation in the region, consequently providing the principle of development for the proposed scheme and taking precedence over other policies contained within the Development Plan.

5.5. Specifically, Policy STR14 states:

"The Council will seek to mitigate the effects of climate change and ensure appropriate environmental protection in the County through:

i. Ensuring new development is sustainably located and designed so as to reduce the need for travel by private car;

ii. Encouraging the use and development of appropriate or suitable brownfield land;

iii. Adopting a sustainable approach to water resource management including supply, surface water run-off and waste water treatment;

iv. Directing development away from flood risk areas, assessing the implications of development in areas at risk of flooding and ensuring that new development does not increase the risk of flooding elsewhere;

v. Encouraging energy efficient development, environmentally acceptable renewable and zero / low carbon energy generation and combined heat and power and communal / district heating networks;

vi. Ensuring that new development has regard to the protection of the environment in terms of air, noise and light pollution, unstable and contaminated land and former landfill sites;

vii. Designing development to be adaptable and resilient to future effects of climate change.

5.6. The proposed development involves the generation of zero/low-carbon energy, so immediately gain policy support from Policy STR14.

5.7. Policy PC1 highlights that outside of settlement boundaries, new development will be permitted for development which is appropriate to the open countryside and where it is essential to have an open countryside location, rather than being sited elsewhere.

5.8. It is accepted that the proposal lies outside the development limits for the town. However, given the nature of the scheme and its intended/required co-location to the factory it intends to serve, this is unavoidable and thus essential to be located in the open countryside. However, the scheme is clearly well related to the development limits (and the industrial character of the immediate locality). As such, it is appropriate to be located here. The scheme therefore accords with policy PC1.

5.9. Furthermore, Policy 17 of Future Wales: National Plan 2040 states that the Welsh Government is committed to the principle of producing renewable and low carbon energy.

Landscape and Visual Amenity

5.10. The proposed development site is located to the south-west of the existing Kimberly Clark Coleshill mill outside the settlement boundary of Flint. The site lies outside of any statutory/national or non-statutory/local landscape designations. The site is classed as open countryside in planning terms and is also designated as a Minerals Safeguarding Area.

5.11. It is also acknowledged that there is a Public Right of Way running across the proposed site, from the south-east corner to the north-west corner. Albeit, the route of this footpath travels to the north of all infrastructure associated with the facility.

5.12. Policy EN4 of the Flintshire Local Development Plan states that "new development, either individually or cumulatively, must not have a significant adverse impact on the character and appearance of the landscape. Landscaping and other mitigation measures should seek to reduce landscape impact and where possible bring about enhancement."

5.13. The proposal nestles into the surrounding setting that is established by woodland and the factory itself. This provides an important context for the scheme in terms of reducing any potential wider visual impacts.

5.14. As evidenced by the two Zone of Theoretical Visibilities (ZTV) shown below (one showing the ZTV with the ventilation stack incorporated and the second ZTV with the stack omitted for comparison). This context significantly contains the visual impact of the scheme, notably to the north west of the site, into the wider open countryside and to the south east, within the settlement of Flint. It must be noted that the extent of the ZTV is largely driven by the proposed stack, which would be the most vertical element of the scheme at 15 metres. Comparatively, this is a slight structure (0.9m diameter) and as a result not substantial in its visual effect. The remaining elements of the scheme will be seen in the context of the Red Pit Community Woodland and within the immediate landscape at intermittent locations along Footpaths 404/35/3040 and 04/35/3030, as well as from fields located between this PRoW and April Rise Farm to the west. They are visually appropriate on that basis.

5.15. The visual effects are thus very localized and not significantly adverse so as to make the scheme unacceptable. The cumulative effect is largely down to the close proximity to the

existing factory, with that visual association mitigating the effects as result of the setting that the factory provides.

5.16. The visual containment of the scheme will also ensure that effects upon residential visual amenity (and also upon the public right of way) are to an acceptable level.

5.17. The proposal therefore accords with Policy EN4.

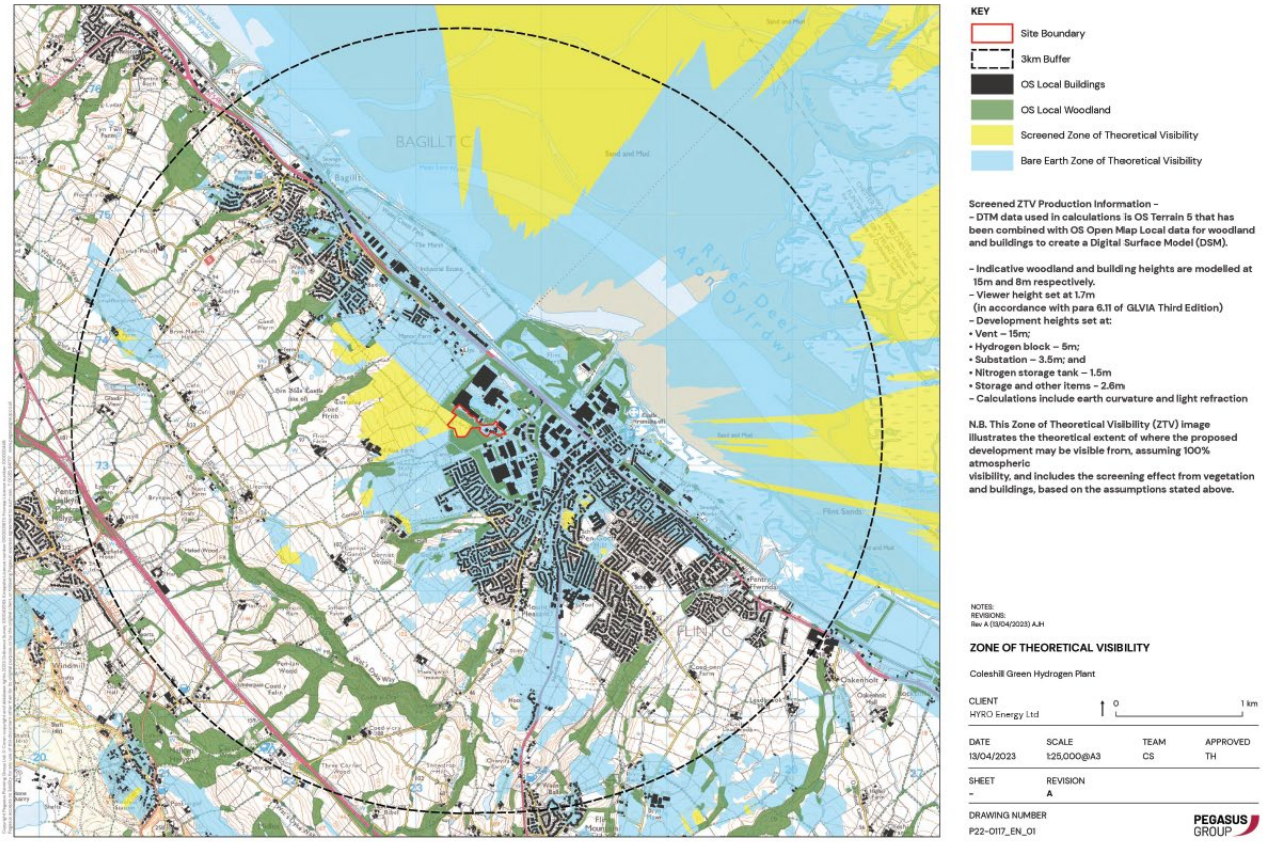

Figure 3: Zone of Theoretical Visibility (with vent stack)

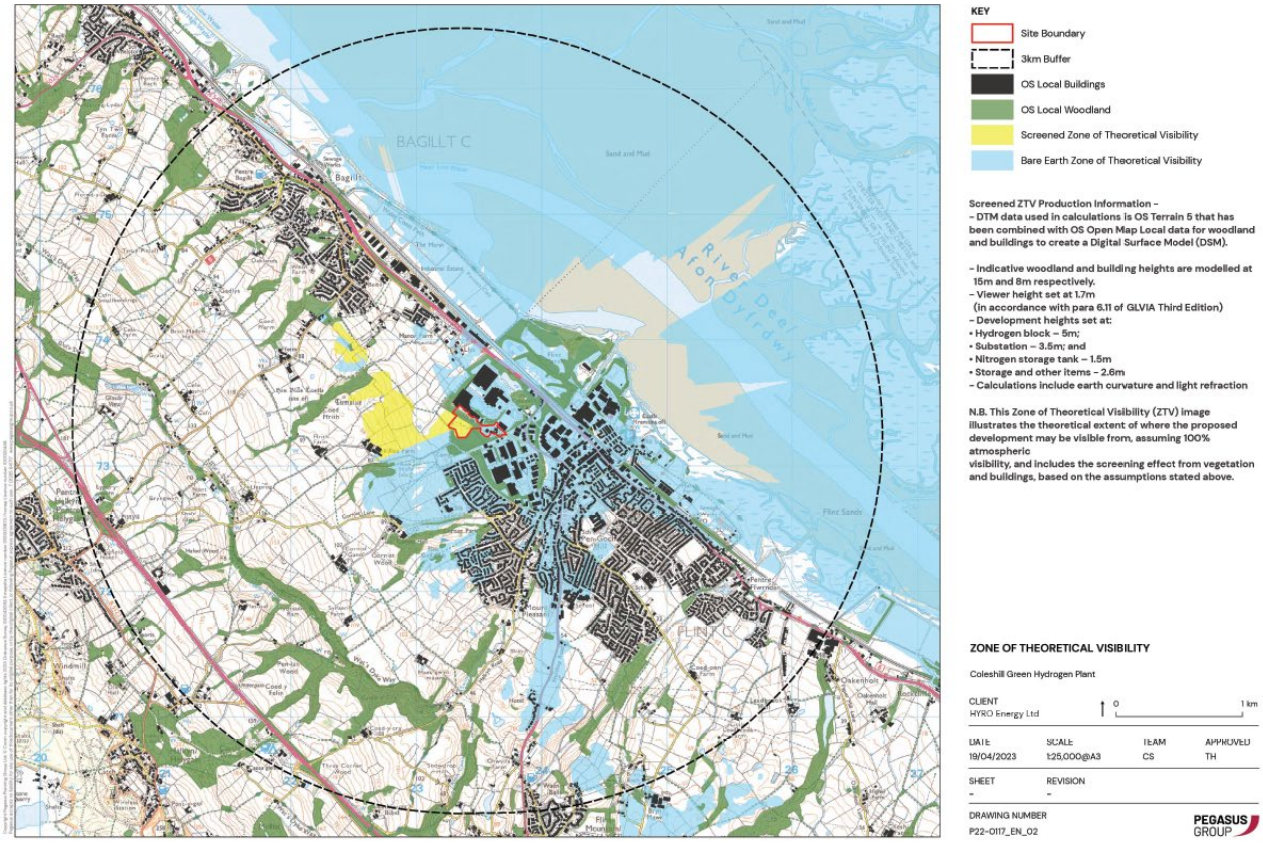

Figure 4: Zone of Theoretical Visibility (without vent stack).

Public Rights of Way

5.18. Policy EN2 states:

> *"Development proposals will be required to protect, maintain and enhance the extent, quality and connectivity of the green infrastructure network, including designated and non-designated green spaces and where appropriate:*
>
> *a. Create new green infrastructure linkages from the proposed development to the existing local network;*
>
> *b. Fill in the gaps in the existing network to improve connectivity.*
>
> *Where the loss or damage of existing green infrastructure is unavoidable, appropriate mitigation and compensation will be required"*

5.19. It is acknowledged that the proposed development will affect a Public Right of Way (PRoW) which crosses the proposed site from the southeast corner to the northwest corner of the site.

5.20. The applicant has undergone positive discussions with the Public Right of Way Officer at Flintshire County Council and established the principle for a Diversion Order to be applied to the existing PRoW. As such, the applicant will be 'filling in the gaps' in the existing network as a result of the proposed development.

5.21. The development is therefore compliant with Policy EN2.

Ecology and Biodiversity

5.22. Policy STR13 of the Development Plan states that *"development should identify, respect, protect, enhance and connect Flintshire's environmental assets, to create a multifunctional network of natural and historic resources."*

5.23. Policy PC3 highlights that all new development should be of a high quality design, retain existing landscape and nature conservation features and incorporate opportunities to enhance biodiversity and ecological connectivity.

5.24. A Preliminary Ecological Appraisal (PEA) has been prepared to accompany this application. Recommendations within this report included securing a planting scheme by planning condition to mitigate the loss of trees on the footprint of the site. Furthermore, the report recommended that habitats for protected species in the area will require monitoring and enhancement. The addendum to the PEA also highlights the additional biodiversity enhancements that the scheme can incorporate.

5.25. The development is therefore compliant with Policy STR13.

Trees and Landscaping

5.26. There are no trees subject to Tree Preservation Orders on the site, nor are any Root Protection Orders enforced.

5.27. Policy EN7 of the Development Plan states that "*where the impact of development affecting trees, woodlands of hedgerows is considered acceptable, development will only be permitted where: a) the development maximises their retention through sensitive design measures; b) where the removal of trees is considered necessary, suitable replacements shall be provided elsewhere within the site; and c) it results in a net benefit in biodiversity.*"

5.28. An Arboricultural Impact Assessment and Tree Survey have been prepared to accompany this planning application. The Arboricultural Impact Assessment concluded that the impact of the proposed development is considered to be low. While there will be a loss of trees to allow access to the application site, the applicant is considering mitigation strategies across the wider Kimberly Clark site Furthermore, the affected area is a small proportion of the existing woodland and will be completely enclosed by retained sections. As such, the design of the site has managed to avoid removals within the mature, high-quality woodland.

5.29. The proposal therefore accords with Policy EN7.

Flood Risk and Drainage

5.30. The proposed development site is not located within any Flood Risk Zone, according to the Welsh Government's Development Advice online mapping tool.

5.31. Policy EN14 of the Development Plan states that *"in order to avoid the risk of flooding, development will not be permitted: a. in areas at risk of fluvial, pluvial, coastal and reservoir flooding, unless it can be demonstrated that the development can be justified in line with national guidance and is supported by a technical assessment that verifies that the new development is designed to alleviate the threat and consequences of flooding; b. where it would lead to an increase in the risk of flooding on the site or elsewhere from fluvial, pluvial,*

coastal or increased surface water run-off from the site; c. where it would have a detrimental effect on the integrity of existing flood risk management assets: or d. where it would impede access to existing and proposed flood risk management assets for maintenance and emergency purposes."

5.32. An assessment of flood risk and drainage is provided and demonstrates accordance with Policy EN14.

Noise, Air Quality and Dust

5.33. Any noise emitted from the site is unlikely to have an adverse impact on nearby receptors.

5.34. Policy EN18 states that *"new development which is sensitive to the effects of existing noise, vibration, odour, dust, light or other pollution or nuisance, will be permitted only if it can be demonstrated that appropriate measures can be taken to mitigate any potential adverse effects. New development which would create an increased risk of noise, vibration, odour, dust, light or other pollution or hazard will only be permitted if: a. it would not unacceptably harm general amenity or living conditions; and b. it would not impose significant restrictions on the use or development of surrounding land. If new external lighting is proposed, particularly in or near to the AONB, this should be considered as part of an overall landscaping scheme and kept to a minimum to avoid light pollution."*

5.35. A Noise Impact Assessment has been prepared and completed to BS4142:2014 standards to supplement this planning application. This demonstrates that the proposal will not unacceptably impact upon the amenity of the area.

5.36. In respect of air quality, the submitted report states *"green hydrogen is produced by splitting water (H2O) into hydrogen and oxygen via a process of electrolysis powered by renewable energy. This means that no CO2 or other pollutants are created during production. There is therefore no requirement to undertake an air quality impact assessment of the operational phase of the facility."*

5.37. The statement then continues to advise upon the effects upon air quality during the construction period. The statement concludes that risk of dust impacts associated with the constriction period will be negligible to low, once the recommended good practice and site-specific mitigation measures are implemented.

5.38. On this basis, the proposal accords with Policy EN18 and PC2, which also refers to development not having a significant impact on amenity.

Ground Conditions

5.39. A coal mining risk assessment has been submitted that indicates that the proposed development is safe with regard to coal mining legacy issues and no further investigation is likely necessary.

Mineral Safeguarding

5.40. Policy EN23 states that non-mineral development within Mineral Safeguarding Area as defined on the proposals map will only be permitted where it can be demonstrated the mineral underlying the site does not merit extraction.

5.41. Large swathes of land are allocated for these purposes within the surrounding area. In the case of the proposed site, only a small element of that wider allocation would be lost. It is such a small area and in close proximity to established woodland that it would not be viable to extract minerals from it.

5.42. On this basis, the proposal accords with Policy EN23.

6. Planning Balance

6.1. The UK and Welsh Governments have made it clear of their intention to progress to Net Zero and part of achieving this is through identifying and altering sources of clean energy with the aim of all electricity to come from low carbon sources. This includes a 10GW target for hydrogen as part of the energy mix. This being seen as very important in allowing the economy to decarbonise. Increasing renewable Green Hydrogen generation and maximising the contribution it can make to energy resilience and overall domestic security are also important factors to consider.

6.2. In this case, the proposals will ultimately enable Kimberly Clark to decarbonise their industrial process, which will provide long-term economic, environmental and social benefits to their business in the long-term. In order to move towards the UK Government's Net Zero commitments, businesses should be actively looking to change the energy sources used for their industrial processes. Kimberly Clark are pioneering this technology in North Wales, which may encourage other companies to follow suit. These proposals provide a significant benefit to Flintshire and Wales as a whole.

6.3. To summarise, the above planning assessment has demonstrated the following:

- This planning application is in compliance with the Development Plan and national planning policy.
- The development and operation of the proposed development would give rise to a wide range of social, environmental, and economic benefits which amount to a very substantial weight in favour of planning permission being granted, making the scheme even more acceptable;
- The impacts associated with the development at this location are very limited, and the proposal is in compliance with the relevant issue specific planning policies in the Development Plan, so do not weigh against the development.

6.4. Whilst it is accepted that the proposal will result in changes to the local environment, such as in terms of visual impact, those changes are not such that would constitute a breach of the policies contained within the Development Plan. This is also the case where any identified harm can be addressed by way of a planning condition, such as matters of landscaping, highway and drainage, or ecological mitigation and enhancement.

6.5. Notwithstanding this accordance with the development plan, the change to the local environment could be viewed as harmful. This statement has set out the substantial benefits of the proposal (especially in terms of providing renewable and low-carbon energy). As such, those benefits will aid the acceptability of the proposals in terms of the Development Plan. Ultimately, the potential for harm is significantly outweighed by the numerous benefits of the proposed development.

6.6. In consideration of compliance with the Development Plan and other planning policy requirements, the significant benefits associated with the Proposed Development and limited adverse effects, and significant wider benefits, it is clear that this development is, on balance, acceptable in planning terms.

6.7. When considering the compliance with the Development Plan, the benefits and the negligible adverse effects, it can be shown that this development is, on balance, acceptable in planning terms.

6.8. The Proposed Development has been shown to achieve the main objectives of sustainable development (environmental, social and economic) without causing undue detriment to any of these matters.

7. Conclusion

7.1. This Planning, Design and Access Statement has been prepared by Pegasus Group on behalf of HRYO Energy Ltd. in support of the full planning application for the construction of a Green Hydrogen Electrolyser (GHE) and associated infrastructure at Kimberly Clark Coleshill Mill, Flint.

7.2. The development supports the UK Government's commitment to achieving net-zero emissions by 2050, along with the Welsh Government's explicit support for adopting renewable and low-carbon technologies. The impacts of the proposal have been shown to be acceptable and, where necessary, mitigation measures have been established to reduce any adverse impacts which may arise.

7.3. Welsh national planning policy is a material consideration in the determination of this planning application. The proposal has been shown to adhere to both Welsh national policy and relevant local Development Plan policies.

7.4. This statement therefore demonstrates that, upon considering the following matters, this proposal on balance falls within the scope of acceptability:

7.5. Accordingly, this proposal represents sustainable development, and as such this planning application should be approved without delay.

Town & Country Planning Act 1990 (as amended)
Planning and Compulsory Purchase Act 2004

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Expertly Done.

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