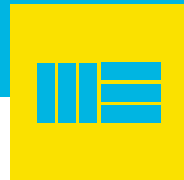


THIS IS A NOTE



TO

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Reading Borough Council

PREPARED BY

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On behalf of Tesco PLC ('Tesco')

DATE

17 May 2022

APPLICATION

212079 – “Erection of food store, unit shops, drive-through restaurant, petrol filling station, 65 residential units, car parking, creation of public space, landscaping, access and associated highway works, use classes A1, A2, A3, A4, A5, B1, D1, C3 without complying with condition 28 (to be removed) of planning permission (06/00010/FUL)”

INTRODUCTION

This note has been prepared in response to a request for further information by Reading Borough Council ('the Council') in relation to an application submitted under Section 73 of the Town and Country Planning Act 1990 at Tesco, Portman Road, Reading, RG30 1AW ('the site'), which is currently being considered (application reference 212079). The application requests the removal of Condition 28 attached to planning permission 06/00010/FUL to enable Tesco to cease using a gas-fired combined heat and power ('CHP') unit at the site.

This note further explains Tesco's motivations in seeking the removal of Condition 28, provides further clarity on Tesco's use of renewable energy from the grid across their estate and sets out why it is not suitable, feasible or viable for Tesco to install another means of producing decentralised energy at the Portman Road store to replace the CHP unit, in line with the requirements of Policy CC4 Decentralised Energy in the Reading Borough Local Plan ('the Local Plan').

PLANNING POLICY CONTEXT

READING BOROUGH LOCAL PLAN

The Reading Borough Local Plan was adopted in November 2019. The Foreword to the Local Plan by Councillor Tony Page notes that Reading Borough Council declared a climate emergency in February 2019 and that the Council are committed to working “*towards achieving a carbon neutral Reading by 2030*”.

Policy CC4 Decentralised Energy states that “... developments of the sizes set out below shall demonstrate how consideration has been given to securing energy for the development from a decentralised energy source. Any development of more than 20 dwellings and/ or non-residential development of over 1,000 sqm shall consider the inclusion of decentralised energy provision, within the site, unless it can be demonstrated that the scheme is not suitable, feasible or viable for this form of energy provision”.

The supporting text for Policy CC4 recognises that a significant amount of energy from centralised sources is lost before it reaches consumers, which is why decentralised sources are promoted as a means to reduce energy waste. The supporting text suggests CHP as a mechanism to converse energy and states that CHP plant is “*much more efficient than large centralised power stations, because the heat is used either as process heat in industry or distributed around buildings via a district heating system*”.

However, we would stress that the supporting text for Policy CC4 recognises that CHP is carbon intensive and concludes by stating that *“airsource or ground-source heat pumps should be considered in the first instance, as these methods are less carbon intensive than CHP”*.

SUSTAINABLE DESIGN AND CONSTRUCTION SUPPLEMENTARY PLANNING DOCUMENT

The Sustainable Design and Construction Supplementary Planning Document (‘SPD’) was adopted in December 2019 and provides guidance on how the key sustainability policies in the Reading Borough Local Plan, including Policy CC4 Decentralised Energy, will be implemented. The SPD is a material consideration in the determination of planning applications.

Section 4 of the SPD relates to Energy Efficiency and sets out guidance on methods that could be used to meet the requirements of Policy CC4. The SPD states that *“fabric improvements are much more likely to ensure long-term carbon reductions and are generally achieved at lower cost than on site generation. Therefore, applicants should seek to improve fabric efficiency in the first instance”*.

Section 8 of the SPD relates to Decentralised Energy and District Heating. In relation to CHP, it is stated within the SPD that *“the background to the approach to CHP is the fact that the proportion of the UK electricity grid that is from renewable energy has grown significantly in recent years, with 30% of all generation from renewables in 2018, with an additional 20% coming from nuclear (a zero-carbon power source). This means that there is an ongoing decarbonisation of the grid.*

This has implications for the efficacy of carbon reductions from gas-fired CHP. It is estimated that by 2030 the electricity generated by CHP engines will be more carbon intensive than use of gas boilers for buildings, which will make gas-fired CHP redundant as a carbon-saving measure”.

Furthermore the SPD recognises that *“combustion based CHP is also a significant contributor to poor air quality. Combustion-based CHP should therefore be avoided”*.

MATERIAL CONSIDERATIONS

THE READING CLIMATE EMERGENCY STRATEGY 2020 – 25

The adoption of the Reading Borough Local Plan and the Sustainable Design and Construction Supplementary Planning Document predate the publication of the Reading Climate Emergency Strategy 2020 – 25 (‘the Strategy’), which was finalised in November 2020. The Strategy sets out a vision for Reading to achieve net zero carbon dioxide emissions by 2030 and that a key component of this will be *“decarbonising [the] power supply and the need for Reading to go electric”*.

The Strategy recognises that emissions from UK power stations have fallen by 60% since 1990 and that the carbon intensity of grid energy is expected to continue to fall as more renewable, carbon free or low carbon energy is generated in the UK. This aligns with the Government’s commitment to decarbonise the UK’s electricity system by 2035, to help the country to achieve its net zero ambitions.

The electrification of heat, and the move away from the use of harmful fossil fuels including gas is therefore noted as being a *“priority”* of Reading’s Strategy to being net zero by 2030. We would highlight that there is, understandably, no support for the use of gas fuelled CHP within the Strategy but significant support for the use of renewable electricity from the grid.

REMOVAL OF CONDITION 28 ATTACHED TO PLANNING PERMISSION 06/00010/FUL

Condition 28 attached to planning permission 06/00010/FUL requires that *“prior to the first opening of the foodstore for trade, the Combined Heat and Power (CHP) Plant as shown on the approved plans shall be installed and be operational by the first opening of the store for trade and retained in accordance with the manufacturer’s specification thereafter”*. The reason for Condition 28 was *“to ensure that the renewable energy generation measures are carried out, in order to reduce harmful carbon dioxide emissions”*.

As set out in our original supporting statement for the removal of Condition 28, Tesco became the first business globally to set a target of becoming zero carbon by 2050 in 2009. Since then, Tesco have set bold science-based targets for both their own operations, and across their supply chain, all aligned with the Paris Climate Agreement goal of limiting global warming to 1.5 degrees. Tesco have measures in place to reach net zero in Group operations by 2035, and across their supply chain by 2050.

Tesco have completed and publicly published a [carbon footprint analysis](#) of their UK operations to understand where the main sources of their greenhouse gas emissions come from, which has helped them to develop reduction strategies. This highlighted the need to reduce emissions from heating, transport and refrigeration, including the removal of gas fuelled CHP plant from across their estate.

From 2017, Tesco switched to using 100% renewable purchased electricity in the UK and Ireland, supported by [renewable certificates](#). Tesco have also been a member of [RE100](#), the global initiative of businesses committed to using 100% renewable electricity, since 2017. Where it is technically feasible and financially viable, Tesco are installing, or are investigating installing, photovoltaic panels, wind turbines and other renewable energy technologies across their estate. As noted, 100% of the electricity purchased across the Group is now renewable and through their on and off site solar panels and wind turbines, Tesco are actively generating additional renewable energy. Tesco have also signed the largest unsubsidised Power Purchase Agreement portfolio in the UK, helping to transform and assist in decarbonising the UK National Grid. In 2020/21 Tesco surpassed their 2020 milestone target for their own operations, with a 54% reduction in Scope 1¹ and Scope 2² greenhouse gas emissions across the Group, compared to the 2015 baseline and a 10% reduction on 2019/20.

Tesco's approach to reducing greenhouse gas emissions through the removal of CHP plant across their estate, and instead sourcing electricity from the grid from 100% renewable sources, is fully supported by the Tesco board, has been widely accepted by a number of Local Authorities across the country, and is fully in line with national policy.

INVESTIGATION INTO ALTERNATIVE DECENTRALISED SOURCES

Policy CC4 Decentralised Energy seeks information as to why it *"is not suitable, feasible or viable"* for decentralised energy sources to be installed as part of development proposals.

The energy that Tesco propose to import from the grid to heat and power the store is from a 100% renewable source in the UK. As set out in Table 1, Tesco have also investigated whether it is suitable, feasible or viable for decentralised and renewable energy technologies to be installed at the store. However, at present, none of the technologies Tesco have assessed are currently feasible or viable.

Table 1 – Assessment of Renewable Energy Technologies for Portman Road Tesco Store

Renewable Technology	Viable or Feasible?
Large and Small Scale Wind Turbines	No It is not feasible to install small scale turbines in the proposed location, given its urban setting. Tesco have undertaken extensive trials of small scale wind turbines in urban settings, which have been proven to be not viable at these trial stores. The electricity Tesco propose to use from the grid is 100% from

¹ Scope 1 greenhouse gas emissions are the direct emissions that originate from assets that Tesco own or control. For example, these include emissions from gas and other fuel consumption in stores, distribution centres and offices globally.

² Scope 2 greenhouse gas emissions are the indirect emissions from the generation of electricity and district heating which Tesco uses. In accordance with the Greenhouse Gas Protocol Scope 2 Guidance they calculate their electricity emissions using both the location and market-based methods.

	renewable sources, which is predominantly from off-site, large scale wind turbines.
Solar Photovoltaic Panels	No Tesco has a programme of installing photovoltaics and is rolling this out on viable sites. Currently it is not viable to install photovoltaics at the Portman Road store. Tesco have assessed the suitability of the store at Portman Road for the installation of photovoltaic panels and a system was considered and designed. However, due to the impact of shading from neighbouring residential developments and the associated limited availability of direct sunlight, the store was found not viable for photovoltaic panels. The photograph at Figure 1 highlights the extent that the roof of the store is shaded from the neighbouring residential development, restricting solar yield. <i>Figure 1 – Shading of Store Roof</i> 
Solar Water Heating	No The demand for hot water at the store is not high enough for the installation of a solar water heating system to be financially viable.
Biomass heating	No Tesco are committed to reducing greenhouse gas emissions across their estate. As biomass boilers, like the existing CHP plant, emit carbon dioxide and contribute to air pollution, Tesco have concluded that the use of renewable energy from the grid is the preferred solution to heat and power the store. In addition, as growing demand for biomass supplies is increasing costs, the use of renewable energy from the grid across their estate is more financially viable for Tesco.
Ground Source Heat	No The ground conditions at the store are unknown. A significantly large loop would be required to satisfy all of the heating and hot water of the store and is therefore not technically viable.

Air Source Heat Pump	No At present there is not sufficient space to accommodate the scale of current heat pump technology at the store. Tesco are open to considering using the plant space freed up from removing the CHP plant for heat pump technology in the future. However, given the significantly smaller area covered by CHP plant, in comparison to the space required for heat pump technology, the use of heat pump technology is reliant on the design advancing and a smaller scale of technology being produced and is therefore not technically viable at this time.
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ENERGY EFFICIENCY MEASURES

As advocated in the Council's Sustainable Design and Construction Supplementary Planning Document Tesco are committed to reducing the amount of electricity that they import from the grid as part of their wider sustainability ambitions. Tesco continue to invest heavily in energy efficiency across all of the Group's operations. Between 2013 and 2021, Tesco reduced the amount of electricity imported to the Portman Road store by 51% through a combination of the following key initiatives:

- Installing and upgrading internal and external LED lighting systems, which Tesco have done across the entire Group estate.
- Upgrading refrigeration controls and installing aerofoil technology in the store, which has also taken place across the Groups full estate, saving 15% energy use in fridge operation.
- Upgrading the air conditioning system.
- Removing the compactor on site.

Tesco will continue to monitor their energy usage and are committed to seeking out new measures that can be incorporated in all their stores to assist in reaching their target of net zero across their operations by 2035, and we would anticipate that other measures will be identified for implementation at Reading-Battle in future.

CLOSING

Tesco have investigated whether a range of decentralised and renewable energy technologies can be installed at the Portman Road store. However, it was found that at present, none of the technologies identified would be suitable, viable or feasible.

Although we appreciate that the CHP unit at the store is a decentralised energy technology, we must emphasise that this is not renewable, is gas-fired and therefore redundant as a carbon saving measure in the modern sustainability climate.

Whilst it is recognised that your current Policy explicitly requires the consideration, and installation where suitable, feasible or viable, of decentralised energy technology, we would submit that the ongoing development of best practice in sustainable energy supply, and the focus on reducing energy consumption, has effectively superseded this approach. Further, as demonstrated above the installation of a decentralised or renewable energy technology is not currently feasible or viable at this site at this time.

The retention of the carbon dioxide producing CHP plant is in conflict with Tesco's net zero commitments, as well as Reading Borough Council's target of being carbon neutral by 2030.

The removal of Condition 28, will enable Tesco to cease using the CHP plant, increase their usage of electricity from the grid produced by renewable sources, and will ensure that the store can reduce its reliance on harmful fossil fuels for heat and power. This approach aligns with the Reading Climate Emergency Strategy, which actively promotes the electrification of heat to ensure that Reading, together with the UK as a whole, can achieve its net zero ambitions.

The CHP unit at the Portman Road store is gas-fired and combustion based, and as stated in the Sustainable Design and Construction Supplementary Planning Document, Tesco agree that the continued use of "*combustion-based CHP should therefore be avoided*".

As the Reading Climate Emergency Strategy was published after the adoption of the Reading Borough Local Plan, we trust that our alignment with the direction of this key document will be given significant weight in the planning balance. The retention of Condition 28, and the subsequent requirement to continue to operate a harmful CHP unit at the site, is in direct conflict with the Reading Climate Emergency Strategy, which stresses the importance of taking urgent action to reduce carbon emissions and decarbonise energy networks in Reading to reach net zero carbon by 2030.