Warwick District Council Draft Net Zero Carbon Development Plan Document

Regulation 19 Consultation Response: Review of the Proposed Policies and Supporting Evidence Base

June 2022





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Project Ref:	34203/A5/Reports/Environmental Planning	
Status:	Draft for client	Final for issue
Issue/Rev:	01	02
Date:	June 2022	June 2022
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Appendix 1: Sustainability Appraisal Compliance Review

1.0 INTRODUCTION

- 1.1 This report sets out the conclusions of a review of the proposed policies within Warwick District Council's (WDC) Draft Net Zero Carbon Development Plan Document (DPD)¹ and the assessments supporting the draft DPD as part of the evidence base, including the Sustainability Appraisal (SA) incorporating Strategic Environmental Assessment (SEA), Equality Impact Assessment (EqIA) and Habitats Regulations Assessment (HRA) Report² and the Health Impact Assessment (HIA)³.
- 1.2 WDC declared a climate emergency in June 2019 and subsequently adopted a Climate Emergency Action Plan in February 2020, which included an objective of introducing planning policies aimed at tackling climate change. In response to this, WDC has prepared a Draft Net Zero Carbon DPD, which addresses climate change and sustainable construction in more detail than policies contained in the adopted Warwick District Local Plan 2011-2029. The draft DPD aims to help WDC meet its target of achieving net zero carbon or as close as possible, by 2030. The DPD will replace the outdated adopted Sustainable Buildings SPD (2008). The draft DPD is at the Regulation 19 consultation stage which runs until 8th June 2022 to offer an opportunity to submit representations to the draft DPD.
- 1.3 The review of the proposed DPD policies has assessed how each of these policies compare to national building regulation standards, industry best practice, and similar policies and precedents in the Local Plans of other local authority areas. This report has also considered the supporting document WDC Zero Carbon DPD Energy and Sustainability policy review⁴ to understand the justification of the proposed policy and ensure that the evidence base and scientific background is sound.
- 1.4 In addition, a notional SAP calculation has been undertaken on a typical 3 bed detached house, which shows the building specification uplift required over Part L 2013 to meet compliance with both Part L 2021, and the proposed WDC Net Zero DPD policy. This demonstrates the building specification required to show compliance with the proposed policies NZC1 Achieving Net Zero Carbon Development, NZC2(A) Making buildings energy efficient, NZC2(B) Zero or Low Carbon

¹ Warwick District Council (April 2022) Net Zero Carbon Development Plan Document Consultation Draft, available here: https://www.warwickdc.gov.uk/info/20799/development_plan_documents/1713/net_zero_carbon_development_plan_docum ent

² Enfusion on behalf of WDC (March 2022) Warwick District Local Plan 2011-2029: Net Zero Carbon DPD Sustainability Appraisal (SA) incorporating Strategic Environmental Assessment (SEA), Equality Impact Assessment (EqIA) & Habitats Regulations Assessment (HRA) Report Regulation 19.

³ Edgars on behalf of WDC (April 2022) Warwick District Council Net Zero Carbon Development Plan Document Health Impact Assessment.

⁴ Bioregional on behalf of WDC (April 2022) Warwick DC Zero Carbon DPD Energy and Sustainability policy review.

Energy Sources and Zero Carbon Ready Technology and NZC2(C) Carbon Offsetting, including the estimated Carbon Offset amount and price.

- 1.5 The SA review has focused on the latest SA material, the Net Zero Carbon DPD SA incorporating SEA, EqIA and HRA Report (herein referred to as the Reg 19 SA Report), prepared by Enfusion on behalf of WDC in March 2022. However, reference has been made to earlier reports where necessary to give a view on the adequacy of the whole iterative SA process. The statutory environmental consultation bodies (Environment Agency, Natural England, Historic England) were consulted upon the SA, SEA and HRA Scoping and Screening Report (May 2021) during May and June 2021. Subsequently, an initial SA incorporating SEA and HRA Report was prepared in September 2021⁵ to accompany the Regulation 18 draft DPD. The Regulation 18 consultation was the first stage in the preparation of the DPD and ran from 26th July 2021 to 13th September 2021.
- 1.6 A review has been undertaken of the SA focused on the key regulatory requirements. The review is included at Appendix 1. It uses a 'traffic light' scoring system to identify areas that would benefit from improvement (amber) and those elements of the SA process that are considered to comply fully with the requirements (green). No areas of deficiency (red) were identified, however there are a number of areas that would benefit from further focus before Examination In Public, so that the DPD is as robust as possible.
- 1.7 In addition, this report includes a review of the HIA prepared by WDC in April 2022 to support the draft DPD. The HIA comprises two stages; Stage 1 Screening Stage and Stage 2 HIA. The aim of the HIA is to assess the potential positive or negative health impacts of the proposed policies within the draft DPD.
- 1.8 The final SA, SEA, EqIA and HRA Report and HIA will be submitted with the submission version of the Plan to the Secretary of State for Examination In Public.

⁵ Enfusion on behalf of WDC (September 2021) Warwick District Local Plan 2011-2029: Net Zero Carbon DPD Sustainability Appraisal (SA) incorporating Strategic Environmental Assessment (SEA) & Habitats Regulations Assessment (HRA) Report.

2.0 POLICY REVIEW

Policy NZC1: Achieving Net Zero Carbon Development

Summary of policy

- 2.1 Policy NZC1 sets an operational net zero carbon target for all new dwellings, and all nonresidential new developments over 1000 m². Wherever possible the policy seeks for development to achieve this net zero standard via onsite measures with carbon offsetting only accepted if it is proven unfeasible or unviable to do so. Policy NZC1 sets an energy hierarchy which must be implemented via the submission of an energy statement, the stages of the hierarchy are set out in policies NZC1, NZC2(A), NZC2(B), and NZC2(C).
- 2.2 The first stage of the energy hierarchy under policy NZC1 is that all new dwellings achieve a minimum 63% reduction in carbon emissions by on-site measures, as compared to the baseline emission rate set by Building Regulations Part L 2021.
- 2.3 Policy NZC1 states that a condition will be applied to planning permissions requiring as built SAP or SBEM calculations to be submitted prior to occupation, they must demonstrate that the finished building meets the standard set in Policy NZC1.

Comparison to building regulation standards, industry best practice, or other similar policies

- 2.4 Building Regulations Part L 2021 takes effect on 15th June 2022 in England and provides a 31% reduction in allowable carbon dioxide emissions compared to Part L 2013. The proposed policy NZC1 is therefore a total 75% reduction in carbon emissions over the current Building Regulations standard. This is in line with accelerating the national Future Homes Standard set for 2025, which aims for new homes built to a 'zero carbon ready' standard in 2025 and is designed to achieve operational net zero carbon by 2030 without the need for retrofit works as the national grid is predicted to continue to decarbonise.
- 2.5 It should be noted however that policy NZC1 sets this as a minimum on-site performance measure, exceeding the timeline set for the Future Homes Standard (FHS) and going beyond the national policy approach. New dwellings built to this proposed net zero standard before 2025 will become carbon negative without retrofit work as the electricity grid continues to decarbonise. It is our opinion that this is excessive, and that the council should not be seeking to set a local target beyond net zero carbon.

Assessment of supporting evidence "Warwick DC Zero Carbon DPD Energy and Sustainability policy review"

- 2.6 The London Plan 2021 is referenced as policy precedent for policy NZC1, however the GLA has released energy planning guidance to confirm that the London Plan net zero carbon target will be with a minimum 35% reduction in carbon emissions delivered by onsite measures for new residential developments, compared to the Part L 2021 baseline. This is 28% lower than the proposed policy NZC1.
- 2.7 The FHS has been used as justification for policy NZC1, it does not however provide justification for exceeding the FHS requirements and timetable, and therefore does not remain within the national policy approach. It is our opinion that the Council should not be seeking to set a local net zero carbon standard above the FHS net zero ready approach.
- 2.8 A local case study for Gallows Hill is referenced as a demonstration of feasibility of policy NZC1 with a 77-80% reduction in carbon emissions over Part L 2013. No details are provided however on how the building specification for this site would perform against Part L 2021 or against the proposed NZC1 energy hierarchy, which would be required to be considered a robust example of feasibility.

<u>Findings</u>

- 2.9 We support the introduction of an energy hierarchy that sets a minimum reduction in carbon emissions to be delivered on-site, we do not however agree that this should be set at a 63% reduction.
- 2.10 As set out in the 2021 National Planning Policy Framework (NPPF), all policies should be underpinned by relevant and up to date evidence which should be adequate, proportionate and focuses tightly on supporting and justifying the policies concerned (para 31). It is our opinion that the provided evidence base is not sufficiently robust to support the proposed policy, and we suggest a viability assessment should be conducted to determine what reduction performance should be set.
- 2.11 We suggest that in place of a planning condition requiring an as built SAP or SBEM calculation for each building, the condition should instead require an as built energy strategy which confirms the as built performance in line with policy NZC1. This would reduce the number of approval transactions the council would have to undertake and avoid delays in clearing postconstruction conditions. By clearing conditions sooner, the delivery speed of quality development can be increased which is necessary to help reduce the housing crisis.

Policy NZC2(A): Making buildings energy efficient

Summary of policy for residential developments

2.12 All new dwellings must demonstrate a 10% improvement in fabric energy efficiency over Part L 2021 targets. All energy statements must also lay out the U-values and airtightness of the proposed building in comparison to the notional values in the Future Homes Standard.

Comparison to building regulation standards, industry best practice, or other similar policies

- 2.13 Point 6.5 of the DPD states that the 10% improvement in dwelling fabric efficiency is set to reflect the approximate uplift to building fabric between Part L 2021 and the indicative Future Homes Standard 2025, however no evidence has been provided to support this figure.
- 2.14 Part L 2021 contains a significant reduction in the Target Fabric Energy Efficiency (TFEE) compared to Part L 2013. Beta testing for Part L 2021 software has shown an approximately 15-25% reduction in the TFEE between 2013 and 2021 assessments for the same notional dwelling. The proposed NZC2(A) policy applied to Part L 2021 standards would increase the fabric efficiency standards by up to 35% over current Building Regulations, we believe this exceeds a proportionate standard for local policy.
- 2.15 The fabric energy performance of a building can be heavily influenced by its build form, and we believe that viability testing should be carried out to test whether this target is practicable and feasible for all building types and build forms.

Assessment of supporting evidence "Warwick DC Zero Carbon DPD Energy and Sustainability policy review"

2.16 Similar policy from Milton Keynes Local Plan (adopted 2019) and the London Plan 2021 has been reviewed and used as justification for NZC2(A). The reviewed policies require 19% and 10% reduction over Part L 2013 respectfully, but the supporting evidence does not explain how they have related this to the new Part L 2021 methodology, which would be required to be considered a robust example of viability.

<u>Findings</u>

2.17 We do not support the introduction of policy NZC2(A) as it has not been justified sufficiently in regard to viability over the uplift to the Part L 2021 TFEE.

Policy NZC2(B): Zero or Low Carbon Energy Sources and Zero Carbon Ready Technology

Summary of policy for residential developments

- 2.18 Policy NZC2(B) is seeking further carbon emission reductions over the 63% requested in NZC2(A) by providing additional renewable or LZC technologies. New dwellings should aim to achieve on-site net zero operational carbon wherever possible.
- 2.19 The submitted energy statement should consider all available zero or low carbon energy sources including:
 - On site renewable energy and low carbon energy generation for individual buildings including solar energy and heat pumps and any other sources of energy/heat that may be applicable;
 - Direct, off grid connections to local offsite renewable energy sources such as solar farms or wind turbines; and
 - Large scale sources of energy/heat such as a direct connection to low carbon heat networks.

Comparison to building regulation standards, industry best practice, or other similar policies

2.20 This standard exceeds the 2025 FHS which is planned to achieve net zero carbon homes without the need for future retrofitting. Homes built to this suggested standard will become carbon negative in future with a potential energy surplus. It is our opinion that the Council should not be seeking to set a local net zero carbon standard above the FHS net zero ready approach, and that future decarbonisation of the national grid should be taken into account in any operational net zero carbon policy setting.

Assessment of supporting evidence "Warwick DC Zero Carbon DPD Energy and Sustainability policy review"

- 2.21 The policy wording suggests that heat pumps would be acceptable under the definition of "low carbon energy technology" however point 7.4 states that the policy wording of NZC2(B) "is written with the view that it is likely that heat pumps [...] will have already been deployed in the design to achieve the required initial 63% carbon reduction against Part L 2021. The policy therefore aims to encourage on-site or near-site renewable electricity generation." This is ambiguous and could lead to confusion in the implementation of the proposed DPD.
- 2.22 The Milton Keynes Local Plan (adopted 2019) and Oxford's 2020-2036 adopted local plan are referenced as precedents for setting carbon emission reduction targets, these do not provide a sound comparison however as they are targeting a reduction over Part L 2013 and both

policies allow for use of heat pumps to achieve their requirements which will not be accepted under NZC2(B).

2.23 Various policy precedents are presented on page 10 of the Warwick DC Zero Carbon DPD Energy and Sustainability policy review however, none are presented that require net zero to be delivered on-site over Part L 2021 regulations.

<u>Findings</u>

2.24 We do not support the NZC2(B) policy as this exceeds the requirements for the homes to be net zero as set out in the FHS.

Policy NZC2(C): Carbon Offsetting

Summary of policy

- 2.25 Where it is demonstrated that a development cannot achieve the net-zero carbon standard through on-site measures, any residual regulated carbon emissions must be offset for a period of 30 years from completion. The carbon offset price has been set at £245 per tonne.
- 2.26 New development is expected to get as close as possible to zero-carbon on-site through fabric performance and the inclusion of renewable energy, the council considers carbon offsetting to be an option of final resort.

Comparison to building regulation standards, industry best practice, or other similar policies

2.27 This standard exceeds the FHS, industry best practice, and other existing policies in the UK. The London Plan 2021 net zero target can be used as a comparison however it only applies to major developments and the carbon offset price is £95 per tonne compared to the proposed NZC2(C) price of £245.

Assessment of supporting evidence "Warwick DC Zero Carbon DPD Energy and Sustainability policy review"

2.28 The review notes that the carbon offset price "is higher than previous national prices adopted in/by other local plans" but it does not provide viability or justification for the uplift.

<u>Findings</u>

2.29 We do not support policy NZC2(C) as this exceeds the requirements for the homes to be net zero carbon ready as set out in the FHS. The high carbon offset price is not sufficiently justified.

Policy NZC3: Embodied Carbon Summary of policy

2.30 New major developments should demonstrate how embodied carbon of the development has been reduced. A whole life-cycle carbon assessment is required for proposed developments over 50 dwellings.

Comparison to building regulation standards, industry best practice, or other similar policies

2.31 The proposed NZC3 policy does not specify a methodology under which to carry out the embodied carbon or whole life-assessments and so it is not possible to effectively compare it to existing similar policies. There currently does not exist a nationally recognised standard for embodied carbon or whole life cycle carbon assessments and so there is a wide variety in assessment scope within existing policy precedents.

<u>Assessment of supporting evidence "Warwick DC Zero Carbon DPD Energy and Sustainability</u> <u>policy review</u>"

2.32 The review recognises that it would "currently be cost prohibitive for one-off and small developments to undertake embodied carbon assessments" but recommends that a requirement to reduce embodied carbon could be introduced if supported by "clear and concise guidance, written for a public audience, outlining a series of simple and cost-effective embodied carbon reduction measures that they could implement." Policy NZC3 does not reference the creation of such a guidance document, and so there appears to be a conflict in the justification of this policy.

<u>Findings</u>

2.33 We do not support policy NZC3 as it is ambiguous and ineffective without the supportive guidance.

SAP modelling

- 2.34 To provide clarity on the building performance uplift required by the proposed policy, we have carried out a notional SAP calculation on a typical 3 bed detached house. Iterations of the assessment have been provided to show the building specification uplift required to meet compliance with Part L 2013, Part L 2021, and the proposed Net Zero DPD policy. This includes the provision of renewable technologies, and calculation of the estimated Carbon Offset payment where required.
- 2.35 Table 1 presents two specification options to achieve the interim FHS (Part L 2021) which is due to come into effect on 15th June 2022. Under this standard, heat pump technology is favoured and provides a significant reduction in carbon emissions compare to the Target Emission Rate (TER). To comply with Part L 2021 using a heat pump led approach, the typical Part L 2013 specification would only need to be uplifted by an increase in external wall U-Value from 0.25 to 0.16 W/m²K. Assuming the wall insulation is mineral wool batt the approximate wall depth would increase from 345 to 420mm. The required wall depth could be reduced to 300mm if additional measures such as high efficiency insulation and glazing specification were used.
- 2.36 The interim FHS does allow for the use of gas boilers, and they are expected to be phased out by the full FHS due in 2025. If a gas boiler led approach was taken, the Part L 2013 specification would need to be uplifted by the items highlighted in table 1, including the external wall U-Value, ground floor U-Value, thermal bridging design, air permeability, and the specification of both mechanical ventilation with heat recovery (MVHR) and solar photovoltaic (PV) panels. The PV array would cover a quarter of the total available roof area.

	Part L 2013 standard	Part L 2021 standard* Heat Pump Option	Part L 2021 standard* Gas Boiler + PV Option
Walls U-Value (W/m ² K)	0.25	0.16	0.16
Wall thickness assuming mineral wool batt	345 mm	420 mm	420 mm
Floor U-Value (W/m ² K)	0.15	0.15	0.09
Roof U-Value (W/m ² K)	0.10	0.10	0.10
Windows (W/m ² K)	1.3	1.3	1.3
Doors (W/m ² K)	1.0	1.0	1.0
Thermal Bridging	Accredited construction details	Accredited construction details	Specialist lintel and ground floor details
Air permeability (m ³ /h.m ²)	5	5	3
Heating system	Gas boiler	Heat Pump	Gas boiler
Ventilation system	Standard extract	Standard extract	MVHR
Renewables	None	None	2 kWp South Facing PV (approx. 14 m2)
Primary energy use (The annual energy demand for lighting, heating & hot water)	99 kWh/m ²	34 kWh/m ²	40 kWh/m ²
CO2 emissions per m ²	17.34 kg	3.1 kg	9.2 kg
EPC rating	В	В	А

 Table 1. *Calculated using beta SAP 10 FSAP software which has not yet been verified by the BRE awaiting the launch of

 Part L 2021 on 15th June 2022.

- 2.37 Table 2 compares the Gas Boiler led Part L 2021 compliant specification from table 1 to the building specification that would be required to meet the proposed Net Zero DPD policy. Two options are presented, option 1 is based on achieving a minimum 63% on-site carbon emissions and a 10% improvement over the Target Fabric Energy Efficiency (TFEE) as per NZC1 and NZC2(A) respectively. Option 2 also meets the additional renewable requirement and achieves full on-site operational net zero carbon standard as per policies NZC2(B) and NZC2(C).
- 2.38 The Net Zero DPD has been written assuming that heat pump is the favourable technology to provide domestic heating and hot water, and it is not feasible to achieve compliance with policy NZC2(A) with the use of a gas boiler. The required uplift from Part L 2021 compliance to DPD option 1 therefore includes a heat pump heating system and the provision of triple glazing windows with a U-Value of 1.1 W/m²K. This specification achieves a 71.2% reduction in carbon emissions over Part L 2021, and the resulting carbon offset payment to achieve compliance with NZC2(C) would be approximately £2,140 for a 100 m² house. It should be noted that this building specification would only be acceptable by the DPD policies if it were demonstrated that the provision of PV is not feasible or viable, it would also have to be demonstrated that the full on-site operational net zero carbon standard was also not feasible or viable using off

site existing or planned zero, low carbon or renewable energy generation or by heat network provision.

2.39 Option 2 of Table 2 shows the building specification that would be required to meet all requirements of NZC1 through NZC3, achieving on-site operational net zero carbon performance. As the net zero standard is achieved, there is no carbon offset payment requirement. The building specification uplift from Part L 2021 compliance includes providing a heat pump, triple glazing, and 3 kWp of south facing PV which covers approximately 40% of the total roof space. The viability testing documentation assumes that the build cost uplift from current standards to this specification is 3%. We believe this has been underestimated, particularly in relation to the fabric energy efficiency which requires the uplift from double to triple glazed windows.

	Part L 2021 standard* Gas Boiler + PV Option	Warwick DPD standard* Option 1 – minimise on-site measures	Warwick DPD standard* Option 2 – minimise carbon offset payment
Walls U-Value (W/m ² K)	0.16	0.16	0.16
Wall thickness assuming mineral wool batt	420 mm	420 mm	420 mm
Floor U-Value (W/m ² K)	0.09	0.09	0.09
Roof U-Value (W/m ² K)	0.10	0.10	0.10
Windows (W/m ² K)	1.3	1.1	1.1
Doors (W/m ² K)	1.0	1.0	1.0
Thermal Bridging	Specialist lintel and ground floor details	Specialist lintel and ground floor details	Specialist lintel and ground floor details
Air permeability (m ³ /h.m ²)	3	3	3
Heating system	Gas boiler	Heat pump	Heat pump
Ventilation system	MVHR	MVHR	MVHR
Renewables	2 kWp South Facing PV (approx. 14 m2)	None	3 kWp South Facing PV (approx. 21 m2)
Primary energy use (annual energy demand for lighting, heating & hot water)	40 kWh/m ²	32 kWh/m ²	- 6.8 kWh/m ² (Energy positive)
CO2 emissions per m ²	9.2 kg	2.9 kg	0 kg
EPC rating	А	В	А
Carbon Offset Payment	N/A	£214 per m ²	None – net zero achieved on-site

Table 2. *Calculated using beta SAP 10 FSAP software which has not yet been verified by the BRE awaiting the launch of Part L 2021 on 15th June 2022.

3.0 REVIEW OF SUPPORTING EVIDENCE BASE

Reg 19 SA Report

Purpose of Review

- 3.1 A review of the SA documents has been undertaken against the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 (the "SEA Regulations") and Section 19 of the Planning and Compulsory Purchase Act 2004 (the "Act"), which sets out requirements for SA. SA is a complex and legalistic process and should be undertaken iteratively, alongside the preparation of the Plan. SEA is also a statutory assessment process, originally required under the European SEA Directive, transposed in the UK by the SEA Regulations and amended by the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 (SI 2018/1232). As set out in the explanatory Memorandum accompanying the Brexit amendments, they are necessary to ensure that the law functions correctly following the UK's exit from the EU. No substantive changes were made by this instrument to the way the SEA regime currently operates. Therefore, the SEA Regulations remain in force.
- 3.2 Local Plan Documents must be prepared in accordance with Section 39 of the Act "*with the objective of contributing to the achievement of sustainable development"*. It should therefore be informed by the SA process, which itself must comply with the SEA Regulations.
- 3.3 The full review of the SA process which includes the Reg 19 SA Report is presented at Appendix 1. This review has sought to identify any areas of the SA that would benefit from further focus or clarity in order to ensure that the DPD is determined as sound at Examination. As above, whilst the review has focused on the Reg 19 SA Report, reference has been made to earlier reports where necessary to give a view on the adequacy of the whole iterative SA process.

Reg 19 SA Report Review Summary

- 3.4 No areas of deficiency were identified in the SA report, however the following areas of the SA would potentially benefit from additional consideration. The full explanation for each is detailed in Appendix 1. Given that the SA and plan-making process is iterative, there is the opportunity for these comments to be addressed prior to Examination and in the case of monitoring, when the Plan is adopted:
 - Current state of the environment;

- Likely significant effects on the environment (cumulative effects, cross border effects, approach to the EqIA and incorporation of the HIA findings);
- Mitigation;
- Reasonable alternatives;
- Monitoring;
- Consultation; and
- Outlining limitations and assumptions.
- 3.5 Additional information to address the points summarised above would increase the robustness of the SA in the reasons for selecting the chosen draft DPD policies based on sustainability merits and assist in achieving the right outcome at Examination.

Health Impact Assessment

Background

- 3.6 There is no statutory requirement for a HIA to be prepared for local planning documents, but it is good practice in plan-making. WDC decided that a HIA would be published to ensure health and wellbeing considerations have been incorporated into the preparation of the draft DPD. The HIA which was prepared for the draft DPD Regulation 19 Consultation in April 2022 was the first version of the HIA prepared in support of the draft DPD.
- 3.7 The HIA comprises two stages; Stage 1 Screening Stage which determines whether or not a full HIA is required and Stage 2 HIA, which assesses the impact of the policies in greater detail. The Screening Stage identified that the draft DPD policies will impact dwellings and buildings where people live, visit and work and will have an impact on social, economic, environmental living conditions affecting health. Therefore, a full HIA was required to be undertaken.
- 3.8 The HIA concludes that the draft DPD's policies will have a positive impact on the health and well-being of the population through improvements to environmental conditions, through reducing emissions, and through improvements to the building energy efficiency. The HIA found that the draft DPD's policies do not disadvantage any socioeconomic or equalities group.

HIA Review Findings

- 3.9 Following a review of the HIA, the following improvements are suggested:
 - The HIA should include a policy and legislation section which should include recent updates to technical standards and published guidance so that stakeholders responding to the

consultation can find further information on HIA if they wish. For example, the HIA should refer to other relevant plans and programmes, including national and local planning policy, the principles set out in the NHS England Healthy New Towns (2015), IEMA Impact Assessment Outlook Journal: Health Impact Assessment in Planning (October 2020), Public Health England, Health Impact Assessment in spatial planning (October 2020), the National Design Guide (first published in October 2019). The understanding of health, how it is measured and assessed and how the built form can influence health has broadened significantly and the most up to date guidance should be referenced;

- The HIA should also include a section on baseline context, so that any changes to the baseline health conditions of the Warwick District area resulting from the draft DPD can be understood and monitored. Data should be sourced from the most recent Census estimates, governmental surveys provided by the Office for National Statistics and the Index of Multiple Deprivation (IMD) to define the population of the district and existing health conditions;
- The effects of the Covid-19 Pandemic have not been mentioned or considered and this should be rectified, given the influence this will have had on the health of the district, both directly and indirectly (through behavioural changes, mental health impacts) and the considerations proposed development may need to incorporate;
- It is surprising that there is no reference to the London Healthy Urban Development Unit (HUDU) Healthy Urban Planning Checklist and methodology. The HUDU works on behalf of the NHS to create healthy, sustainable communities. The HUDU Checklist is nationally recognised as an appropriate assessment tool, which is regularly updated to reflect advances in how health and well-being are measured. The HUDU Rapid HIA Tool¹ includes 11 key health themes which cover wider determinants of health including the natural environment, air quality and noise. Some of these topics could be elaborated on within the HIA, in addition to the five HIA questions that have been assessed in the HIA;
- The HIA could include an additional column to suggest mitigation and/or enhancement measures for each topic that should be considered in the draft DPD; and
- The findings of the HIA should be better coordinated with the SA and EqIA. The HIA states that the draft DPD policies relate only to creating net zero carbon buildings and therefore the health impacts will not be likely to generate cumulative and/ or synergistic impacts. However as set out in Appendix 1 of this report, cumulative effects have not been well assessed within the SA and it is unclear how this conclusion has been drawn, as no methodology is provided in the SA or the HIA. The EqIA identifies the potential for some negative effects to result from the draft DPD policies, including the possibility that the requirements for net zero carbon could compromise the viability and implementation of certain development proposals, which could result in housing needs not being met. Potential negative effects, including for those persons with particular needs, such as the

¹ London Healthy Urban Development Unit (2019) Rapid Health Impact Assessment Tool

elderly or disabled may arise. It is recommended that more thorough testing of the policies is completed in this respect, particularly within the HIA as the ability to meet housing / employment needs has the potential for significant adverse effects on health, including adverse cumulative and cross border effects, that are not currently addressed in the HIA. The assessments should be better joined up so that the results align.

4.0 CONCLUSION

- 4.1 The conclusion reached within this report, based on a review of the Reg 19 SA Report in Appendix 1, is that there are a number of areas that would benefit from further focus before Examination so that the process is as robust as possible. In addition, a review of the HIA has identified several improvements that could be made before Examination, including better linkage of the HIA findings and the SA and EqIA.
- 4.2 The review of the proposed DPD policies has identified where support is given, and it has been explained where the proposed policies are not supported. This report has shown where the supporting document WDC Zero Carbon DPD Energy and Sustainability policy review should be improved to provide greater justification and to ensure that the scientific background and viability testing is sound.

APPENDIX 1: SUSTAINABILITY APPRAISAL COMPLIANCE REVIEW

SUSTAINABILITY APPRAISAL COMPLIANCE REVIEW		
	Compliance Key	Notes
This is a compliance review against the requirements of the Regulations. It has not been undertaken by a legal professional. The SA process has been reviewed against the SEA Regulations and	Key	Meets requirements
requirements of the Planning and Compulsory Purchase Act 2004 on SA.		Potential risk of challenge. Improvements suggested
		High risk of challenge. Does not meet requirements
SEA Regulations, Regulation 12 and Schedule 2 - Contents of Envi	ironmental Re	port
1. An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.		Section 1 of the Reg 19 SA Report explains the purpose of the SA/SEA, HRA, EqIA and HIA and the aims of the dra WDC's commitments resulting from the Climate Emergency which was declared on 27 th June 2019 and the role of Climate Emergency Action Programme (CEAP), through developing policies and setting standards aimed at redu standards. The relationship between the SA process and the Local Plan process is outlined in Figure 1.1 and it is e process for the draft DPD.
		The Reg 19 SA Report acknowledges the SA process undertaken for the Warwick Local Plan during its preparation a conform with the previous assessments but be updated where necessary. The draft DPD expands and updates the L development that will positively contribute to the more recent targets and recommendations set by both local and sets out the key plans and projects relevant to the draft DPD and includes a full range: UK Committee on Climate Ch Homes Standard: consultation on changes to Part L and Part F of the Building Regulations for new dwellings (20 Decarbonisation and Economic Strategy Bill (2019-2021). The Report includes the most recent update to the NI biodiversity net gain and consideration of climate change. The above demonstrates that the plans and programmes r Reg 18 version of the SA was prepared.
2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.		The Reg 19 SA Report explains that the baseline context for the Warwick District area was undertaken as part of the line with the development of the Local Plan through to adoption in 2017. Section 3.2 includes an update to the Warwick District area relevant to the draft DPD. A review of the baseline conditions has been undertaken for each occurred since the previous consultation. Section 3.20 summarises the key issues and opportunities for sustainable
		It would be helpful if the Reg 19 SA Report also detailed whether any technology or sustainable innovations had be and the previous consultations due to increasing awareness of the climate change agenda that were having a positi may change the context. Such initiatives may include more prevalent landscaping and planting, incorporation of el schemes, improved waste management, increased solar panels on recent developments. Consultation and engagem of where such initiatives have been implemented and may also provide baseline data on energy efficiency and carb
		Neither the Reg 18 SA Report or the Reg 19 SA Report makes reference to the COVID-19 pandemic, which is est including an increased prevalence of home working and less travel (with resultant impacts on emissions reduction) w
		The SA confirms that the SA objectives were identified at the SA scoping stage for the Local Plan from the informat analysis and the SA Framework is the same as was used to assess the Local Plan (adopted in 2017) in order to demo and assessment. Given the points raised above and the updates to the baseline in general, consideration should updating as a result.
		A specific section in the Reg 19 SA Report defining the likely future evolution of the Warwick District area without in expected in the absence of the DPD should be included as this is not currently addressed. This section could sugge occur without the DPD in place.
3. The environmental characteristics of areas likely to be significantly affected.		As above, Section 3.2 of the Reg 19 SA Report includes an update to the key information and summarises the base DPD. A review of the baseline conditions has been undertaken for each topic, for example, by detailing the popul Section 3.20 summarises the key issues and opportunities for sustainable development and the draft DPD.
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds(a) and the Habitats Directive.		The Reg 19 SA Report highlights the local sustainability considerations affecting the Warwick District area includin European designated ecological sites by the Habitats Regulations (former EU Habitats Directive) and the key enviro potentially be exacerbated by development. Following Brexit, these Regulations still apply (The Conservation of Habi amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579)) and in an iterative and integrate way into the production of local plan documents in order to ensure that any potential ne The SA explains that there is only one internationally designated site, Ensor's Pool Special Area of Conservation (S sites within a 20 km radius and therefore, unlikely to be significant effects.

draft DPD and Warwick Local Plan 2011-2029. Section 1.8 outlines of the planning system in helping to achieve the ambitions of the educing carbon emissions by improving net zero carbon building s explained that the key stages and tasks are applicable to the SA

n and examination and states that the SA for the draft DPD should e Local Plan policies and introduces new local building standards in d central government since the Local Plan was adopted. Section 3 Change Reducing UK emissions – 2021 Progress Report, the Future 2021), UK Net Zero Strategy: Build Back Greener (2021) and the NPPF (July 2021), acknowledging the significant implications for s review has been revised since the Scoping stage and the previous

the SA scoping stage in 2014 and updated as the SA progressed in e key information and summarises the baseline conditions of the ch topic, for example, by detailing the population growth that has le development and the draft DPD.

I been implemented in the plan area since the Local Plan adoption itive effect on the baseline carbon emissions and sustainability and electric vehicle charging points, the use of ultra-low emission bus ment with existing developers could assist in highlighting examples rbon reductions.

essential considering the resulting recession and lifestyle changes which will have had an effect since the outdated baseline position.

mation collated in the plans and programmes review and baseline nonstrate conformity with the higher level of development planning Id be given to whether any aspect of the SA Framework requires

implementation of the DPD to discuss any changes to the baseline gest, for example projects or local developments that are likely to

seline conditions of the Warwick District area relevant to the draft pulation growth that has occurred since the previous consultation.

ding on biodiversity and acknowledges the protection afforded to ironmental problems including threats and pressures which should abitats and Species Regulations 2017 (2017) SI No. 2017/1012, as and require environmental assessment processes to be undertaken negative environmental effects are identified and can be mitigated. (SAC), within the Warwick District area, with no other designated

	The HRA process and assessment conclusions are well outlined in the Reg 18 SA Report and the Reg 19 SA Report HRA to be undertaken in parallel to the SA and assessments to be coordinated. This enables solid conclusions to I the findings of the HRA have been robustly incorporated.
	Section 4.68 summarises the conclusions of the HRA screening (2014) undertaken of the developing Local Plar associated with changes in air quality, water quality and levels, recreational disturbance or habitat loss/fragmentation changes to requirements, policy, guidance and the methodology in the UK for undertaking HRA (and through which namely that mitigation cannot be taken into account at the Screening stage. Therefore, the SA has updated the screening has been applied without consideration of embedded mitigation such as through Local Plan policies SPA/SAC/Ramsar sites, particularly the Severn Estuary is accounted for and 3) since the draft DPD is focused on the air quality and water levels was updated. The HRA considers it is very unlikely that any development activities arising sites, given the draft DPD does not propose any additional new development. The second stage of the HRA process policy mitigation measures. The HRA concludes that the draft DPD will not have adverse effects, alone or in internationally designated sites.
5. The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.	See detailed commentary within response to question 1. above.
 6. The likely significant effects on the environment, including short, medium and long-term effects, permanent and temporary effects, positive and negative effects, and secondary, cumulative and synergistic effects, on issues such as— (a) biodiversity; (b) population; (c) human health; (d) fauna; (e) flora; (f) soil; (g) water; (h) air; (i) climatic factors; (j) material assets; 	Section 2 of the Reg 19 SA Report outlines the methodology used in the SA including the Sustainability Framework and the draft DPD as a whole for likely significant effects on the environment. The SA Framework provides the basis evaluated and the alternative options compared. The assessment is presented as a narrative in section 4 and the matrices whilst allowing the SA to focus on the aspects of the draft DPD that are likely to have significant effects. T developed since the Reg 18 stage – NZC3 Net Zero Carbon Embodied Carbon, and NZC4 Net Zero Carbon Existing in that the Reg 19 SA Report has built upon the SAs of the previous draft policies and updated/reassessed the re assessed.
	The approach to Table 4.1 which assesses the compatibility of the SA Objectives and the four overarching DPD Objectives is that professional judgment was used. In particular, the scoring of the DPD Objectives against the Land/S themes, as the assessment found that the draft DPD Objectives were compatible with all the sustainability themes would be some form of incompatibility with land, soils, archaeology, habitats and species where new buildings/ developments. Therefore, it would be helpful if the conclusions were better justified.
 (k) cultural heritage, including architectural and archaeological heritage; (l) landscape; and (m) the inter-relationship between the issues referred to in sub- 	Section 2 of the Reg 19 SA confirms that the assessment included consideration of the likely short, medium, and lo negative effects, and secondary, cumulative, and synergistic effects in accordance with the SEA Regulations. A de explaining how these have been addressed in the context of the draft DPD.
paragraphs (a) to (l).	Section 4.54 states that significant interrelationships are indicated between SA objectives for the economy, health that as the policies are implemented, the longer-term positive effects identified will be cumulative. The SA did not is no methodology and justification provided for the assessment of cumulative effects. The approach to the assinconsistent and ad hoc between topics that list some considerations. The assessment of these effects should sh operate together as well as consider how each of the SA Objectives might interact with one another. The Reg methodology used to determine cumulative effects, which would create a more robust and transparent assessment considered in the assessments of whether a policy performed well or not. The SA Methodology section should outli effect (e.g. major/minor positive/negative/neutral) given in the significance key (Table 2.2). The cumulative effect including sustainable transport, landscaping, for any potential interactions or conflicts.
	The Reg 19 SA Report does not refer to cross border effects, for example in relation to the economy or downstream of the plan area and should be documented in the SA. The approach to the assessment of cumulative effects sh consistent between the different environmental topics. The SA explains that Stratford-on-Avon District Council also merge both Councils into a single District Council for South Warwickshire, Warwick and Stratford-on-Avon Councils a have shared ambitions and have prepared a joint Climate Change Action Programme. Therefore, in order to ensure of the wider area, including policies and proposed development within Stratford-on-Avon DC should be included in
	The Reg 19 SA Report includes an EqIA which has been undertaken for the draft DPD, the findings of which are p the Warwick District Area including reference to relevant socioeconomic data for the population and the Index of Output Areas (LSOA) within Warwick. This should be updated as more recent data becomes available, for example net zero carbon in new buildings may differentially impact the categories of protected characteristics and identifies draft DPD policies. The commentary on the reasoning why impacts may be different is very brief and would bene there is no clear relationship or direct impact on equal opportunities. The EqIA concludes that by reducing the risks extreme weather events, the risks to vulnerable people may be reduced with positive effects. However, some pote possibility that the requirements for net zero carbon could compromise the viability and implementation of certain

ort. This is ideal, given the requirements of the Regulations for the be drawn in terms of the assessment of ecological effects, given

an, which found that there would be no likely significant effects tion on Ensor's Pool SAC. The Reg 19 SA Report reviews the recent ch the Warwick Local Plan had been assessed) that have occurred, he assessment process to ensure 1) that the initial stage of HRA cies 2) the increased understanding of potential disturbance on the air and water environments, the HRA screening with regard to ng from the draft DPD would have significant effects on designated ess, the appropriate assessment, is able to consider the embedded n combination with other plans and projects, on the integrity of

rk and Objectives (Table 2.1) used to assess the draft DPD Policies is by which the sustainability effects of the draft DPD are described, e SA explains that this minimises the number of detailed technical . The SA has tested the two new draft DPD Policies that have been ng Buildings which reinforces the iterative nature of the SA process revised policy wordings to ensure the likely significant effects are

pjectives should be explained further than the justification provided /Soil Resources, Natural Environment and Historic Environment SA s with no incompatibilities identified. However, it is likely that there relopments are being constructed to meet housing and employment

long-term effects, permanent and temporary effects, positive and lefinition should be provided for each of these terms, in particular

Ith & wellbeing, climate change, and the natural environment and ot find any significant negative cumulative effects. However, there assessment of cumulative effects is not well outlined and seems show where the different effects arise when two or more options g 19 SA Report should include a separate section setting out the ent. For example, it is not clear how cumulative effects have been tline how these effects contribute to determining the sustainability ects with other policies in the Local Plan should also be addressed,

am flooding, which can occur where a plan will have effects outside should be well outlined in the methodology section and should be so declared a climate emergency in 2019, and with the proposal to s are working together on net zero carbon targets. The two Councils ure a joined up approach, an assessment of the cumulative effects in the SA.

e presented in Appendix 2. The EqIA sets the baseline position for of Multiple Deprivation (IMD) rankings for the Lower Layer Super ole the 2021 Census. The EqIA considers how the requirements for es where groups may be more vulnerable to being affected by the nefit from additional explanation and justification, including where ks to health and wellbeing associated with climate change through tential negative effects are also identified, for example there is the in development proposals, which could result in housing needs not

Planning and Compulsory Purchase Act 2004 - Section 19 Require	ements for SA ce ID: 11-013-20140306. PPG paragraph references provided below, where relevant.
10. A non-technical summary of the information provided under paragraphs 1 to 9.	An NTS has been published within the supporting documents. It is good practice to have an NTS for each revision of iterations. The NTS is written in language that can be understood easily and summarises all key parts of the process
9. A description of the measures envisaged concerning monitoring in accordance with regulation 17.	Section 5 of the Reg 19 SA Report. Section 5 should be expanded upon to identify the trends and monitoring indicators for each of the SA Objectives of time from the baseline conditions, that may occur as a result of the DPD to make sure that unexpected effects are in timeframes for monitoring. The measures should also monitor the implementation of SA mitigation measures, there
	The Reg 19 SA Report should include a section setting out the assumptions and limitations of the SA and predicting et regarding secondary data, the accuracy and availability of publicly available information in identifying baseline correlying on subjective judgement.
	Section 4 of the Reg 19 SA Report concludes that the main reason for progressing the draft DPD rather than the Do- scenarios is that the strategy set out in the draft DPD progresses WDC's climate change commitments. The other tw a net zero carbon organisation by 2025 and facilitating the total carbon emissions within Warwick District as close to its seems that this conclusion has been foregone throughout the SA process. It is unknown whether the other poss to WDC's commitments and objectives.
	It is considered that there are more reasonable alternatives for each draft DPD policy than these three options still for example comprise policies and standards set by other local planning authorities and the London Plan 2021, as which the SA explains (in Section 3.19) has been completed in support of the draft DPD to research how plan policy of plans, therefore forming a proxy evidence base for their applicability in Warwick. It is unclear why the other policy for sustainability effects in the SA, as these may comprise equally good or better options than those currently press for the selection or rejection of each standard and policy option should be clearly set out in a table in the SA, to mal any initial high-level appraisal that may have been undertaken of the policies, for example at the SA Scoping stage ar reviewed by the SA team to ensure that the relevant factors from the SA were being considered. The degree to whether these decisions were due to sustainability reasons or not. This should be better outlined. This would ensure selected as the preferred option following thorough testing of the likely significant effects on the environment, Commitments within Stratford-on-Avon District Council should also be assessed as a reasonable alternative, partice District Council for South Warwickshire.
8. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	The Reg 18 SA Report and the Reg 19 SA Report have appraised three options (Do Nothing, National Approach sustainability impacts. A summary of the findings is shown in Table 4.2. Section 2 of the Reg 19 SA Report explains that at the previous consultation stage, it was considered there were no need to be tested through SA as doing nothing is not a reasonable alternative for WDC due to the need to provide needs. However, at the Reg 18 consultation, one respondent commented that the SA should test the "do-nothing" requirements" as reasonable alternatives. The Council agreed that it could do nothing, and that it also has a choice than national requirements set in building regulations. Accordingly, these two alternative scenarios have been tested
7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of mplementing the plan or programme.	Section 2 of the Reg 19 SA Report explains that the assessments allow for the consideration of mitigation measures Plan and embedded within the draft DPD. Any possibilities for mitigating any potential significant negative effects plan-makers, as relevant. Appraisals of all reasonable alternatives against the SA Framework pre-mitigation as well of effects in a transparent way to the decision makers. It would also be helpful if there was a clear section on mitiga because of suggestions raised during the appraisal process for reducing the adverse effects from the implementation
	done in consultation with developers in terms of the impacts this may have in practice, as this could have potential border cumulative effects. The Reg 19 SA Report states that health and wellbeing factors were taken into account in the SA of the draft DPD However, the HIA which has been prepared and is included as a separate document on the consultation website is r should be better linked, given the need for SA to consider other relevant programmes and for the results to be me has fed into the assessments of the draft DPD policies, and a separate section should be dedicated to this within the
	being met. Potential negative effects, including for those persons with particular needs, such as the elderly or dis provided in the draft DPD, however it is not clear what these are. The SA explains that the Council has undertaken a is unlikely to be threatened by the local requirements. The policies recognise that the carbon reductions sought provision for such a situation – but only in exceptional circumstances. It is recommended that more thorough testin

A Setting the context and objectives, establishing the baseline and deciding on the scope

disabled may arise. The EqIA states that mitigation measures are a high-level viability impact assessment and development viability t could be unviable or not feasible in some situations and makes ting of the policies is completed in this respect, and this should be ially significant negative effects, especially when considering cross

PD and have been integrated into the overall assessment process. s not well mentioned in the SA. The conclusions of the HIA and SA meaningfully incorporated into the SA. It is not clear how the HIA the SA.

es that may be provided through policies in the adopted WDC Local tts, or enhancing potential positive effects, were suggested to the ell as post-mitigation should be completed to provide an indication gation, outlining the changes to the draft DPD which have occurred tion of the DPD and enhancing its benefits.

ch, draft DPD Policies) against the SA Framework for their likely

no meaningful other options for this specific topic DPD that would ide sufficient development land to meet housing and employment g" and "follow the national approach to improved energy efficiency ice in setting higher energy efficiency standards for new buildings the in the Reg 19 SA Report.

still, and that these should also be appraised. These options could as identified in The Energy & Sustainability Policy Review (2022), by requirements have been structured and justified in other adopted licy requirements in here have not been considered and appraised resented. This exercise should be completed and then the reasons nake the process more thorough and robust. The SA should outline and explain whether the considered list of alternatives was initially to which the SA team inputted to refining options is unclear, as is ensure true comparisons can be drawn and that the best option is nt, both alone and cumulatively, of each reasonable alternative. ticularly given that the two Councils may be merging into a single

o-Nothing or the National Approach to Improving Energy Efficiency two scenarios do not progress WDC's commitments for becoming to zero as possible by 2030. Due to the limited options appraised, possible alternatives mentioned above would successfully contribute

effects. The section should outline the limitations and assumptions conditions, ensuring alternatives were appraised consistently and

s used in the SA process that will be used to monitor change over e identified and dealt with. The SA should suggest the frequencies/ ereby identifying positive as well as negative effects.

n of the SA, so that it is clear how the SA has evolved through the ess, conclusions and next steps.

	See detailed commentary within response to question 1. above.
	See detailed commentary within response to questions 2. and 3. above.
	See detailed commentary within response to questions 4. and 6. above.
	See detailed commentary within response to questions in and of above.
	Covered in Reg 19 SA Report. It would have been helpful though for the report to explain that the SA Framewor changes (including effects that COVID-19 may have had on baseline and plan priorities).
	Section 2.13 of the Reg 19 SA Report outlines the key messages received from the previous consultations including the Environment Agency) and the public, however this does not explain how and where in the Reg 19 SA Report th
	WDC is encouraged to engage with developers and businesses to understand their own corporate commitments, given in practice. Any consultation comments should be reviewed and addressed in the draft DPD.
	See detailed commentary within response to question 8. above.
	See detailed commentary within response to question 8. above.
	See detailed commentary within response to question 7. above.
	See detailed commentary within response to question 9. above.
uirements	
	No areas of deficiency were identified. Some further explanation suggested, as set out above and in the accompany
dies and the p	public
	Covered in SA Scoping Report and each subsequent report.
N/A	To be done after adoption of the Plan.
	uirements

ork of objectives has been reviewed following baseline and policy
ng from the relevant bodies (Natural England, Historic England and the consultation responses have been addressed.
given that the policies in the draft DPD will require implementation
nying report.