Draft Canterbury District Local Plan March 2024

Comments from Chris Lowe

1 LANGUAGE

Language is very important to establish exactly what the Plan means, and examples where words in the Draft Plan are wrong are as follows:

A SHOULD and MUST

It is regrettable and unacceptable that the term 'should' is over-used in the Plan, for example: Policy SS2 says: “New residential and commercial development in the district ***should*** be designed to achieve net zero operational carbon emissions.”

Grammatically, “Should is a modal verb that expresses an obligation or expectation. It implies that something is advisable or desirable to do, but not necessarily required.”

In contrast: “Must is a modal verb that expresses a strong obligation or necessity. It implies that something is required or mandatory to do, and that there are consequences for not doing it.” For example: “We must do something to stop climate change, it’s a matter of survival.”

This is literally true of the Local Plan – if large carbon reduction measures are not implemented we will all suffer devastating impacts, it is as simple as that.

Also, the Climate Change Act, is a legal requirement so the Council *must* ensure that strong emissions reductions are built into the plan.

So the correct word to use is 'must' not “should”, so please change them all to 'must'.

B GROWTH

I strongly Object to the excessive misuse of the term “growth”. The term: “growth” on its own is meaningless. It is often taken to mean an expanding economy, and if so this needs to be stated. Even with that meaning it is unacceptable.
For example: It is widely recognised that a growing Gross Domestic Product implies increasing climate change emissions, hence a "growing economy” is ***not*** desirable and should not be an objective nor used in the Plan.

So what is required is something that really defines what we, the residents of Canterbury require, which is better defined by: “An improved quality of life for all residents”.

As improvements may often affect different groups unequally, the definition should be further refined to: “An improved quality of life for all residents, especially the least well off”, otherwise those who are better off may benefit disproportionately.

So please replace 'growth', and similar phrases with:

“An improved quality of life for all residents, especially the least well off”

C NET ZERO

The draft Local Plan 2040, contains some thirty references to 'Net Zero', but this term is meaningless as it does not say how it will ensure that the result is truly 'Net Zero'.

The key issue is that the **carbon dioxide we are producing now will stay in the atmosphere for around hundred years.**
To stop global heating we must dramatically reduce our total carbon emissions now, and NOT add to them.

So rapid reductions in emissions are needed now, not sometime in the future. We also need to protect all our "carbon sinks", such as woodlands, in order to remove emissions created in the past

If the sinks are slowly developing ones, such as planting trees, they will gradually increase the absorption of carbon dioxide over decades, but cannot be counted within the life span of this draft Local Plan.

Unfortunately, the potential "offsets" such as onshore wind generators and solar farms, conflict with other needs for the land, such as growing food, supporting biodiversity and creating new biodiversity for "net biodiversity gain" as well as increasing woodland.

Hence a far more effective and fast alternative is to put solar panels, both solar photovoltaic and solar thermal onto all new buildings, as well as on all suitable existing buildings, and this **must** be required and specified in the revised Local Plan.

Additionally, heat Pumps **must** be specified for all new buildings, but these are not carbon-negative, they merely reduce the emissions caused by heating or cooling buildings.

It is vital for the clarity of the Plan that clear terminology is used, to avoid the legal difficulties such as the several successful High Court challenges to the Government from its unjustified use of Net Zero in its decarbonisation plans.

2 HOUSING & ASSOCIATED INFRASTRUCTURE

A I strongly disagree with Paragraph 1.10 which says: "This plan responds to more recent changes to the NPPF, which further increase the rate of housebuilding the government expects to see in the district".

The NPPF Paragraph 61 says: "The outcome of the standard method **is an advisory starting-point** for establishing a housing requirement for the area. There may be exceptional circumstances, including relating to the particular demographic characteristics of an area which justify an alternative approach to assessing housing need; in which case the alternative approach should also reflect current and future demographic trends and market signals."

Furthermore, on 23rd January 2024 Hansard Lee Rowley (Minister) said: "I am **absolutely certain** that there will be more cases for exceptional circumstances put forward in the future, and I encourage councils to consider them if they believe that they apply. Logically, I would then **expect more cases for exceptional circumstances to be accepted** by the Planning Inspectorate, although that will be for the inspectorate to determine on a case-by-case basis. It is the Government's intention to indicate that cases for exceptional circumstances can be made, that local authorities should weigh up making them and that, if they feel that they have a strong case through the Planning Inspectorate process, **they do so for the good of the communities they seek to serve."**

So the Minister is actually supporting Councils going for lower growth if that is more appropriate.

It is well known that Canterbury is different from many other Kent councils, because we have several higher education establishments here whose students have lower than average birth rates so they do not contribute to the natural population increase in the District as happens in other districts.
Similarly, there is a higher proportion of people over child-bearing age, which also decreases the birth rate.
Data published by Kent County Council's Kent Analytics in February, 2024 shows that Canterbury's natural population decreased by 500 over 2021-22.
The District's lower birth rates mean that the natural population is decreasing, *not* increasing, unless there is significant in-migration. The latter is of course not required, as that increases competition for jobs etc., and so increases unemployment and potentially homelessness.

Importantly, the ONS estimate that: between 2018 and 2028, the number of people aged 75 to 84 years in England is projected to increase by 33.9%, and aged 85 years and over by 22.8%, and clearly these people will not be having any children, further decreasing natural population change.

Indeed the ONS Figure 3: Projected percentage change in number of households for local authorities in England, 2018 to 2028 figures for Canterbury are:
Number of households in 2018: 66094
Number of households in 2028: 70979
Change in number of households:**4885**
This would imply a total of 10747 over 22 years to 2040 not the not the planned total of 24,514 (source: Development Topic paper 2024 February 2024 P 96 Table 8.8: Summary table of housing land supply)

Bearing in mind that the Council should be seeking a better quality of life for all residents, this means we should **not** be building excessive numbers of new houses.

In Japan they already have similar issues and this has led to Nine million house being empty.
(See: https://www.theguardian.com/world/2024/may/01/akyia-houses-why-japan-has-nine-million-empty-homes)
This has caused blight in many areas as dilapidated houses are not attractive for all sorts of reasons, and I am sure that the Council does not want to see similar blight ?

In addition, builders won't build unless they are fairly certain of selling their new houses for a good price, so allocating allocating excessive land for housing would blight those areas for a long time.

So we must aim for the minimum number of houses for the resident population.

Latest information on employment (https://www.ons.gov.uk/visualisations/labourmarketlocal/E07000106/) shows that Employment in Canterbury has decreased compared with the previous year. Canterbury's employment rate was lower than across the South East as a whole in the year ending December 2023. Unemployment (people looking for work) has fallen since a year earlier. The most recent unemployment rate for Canterbury was higher than across the South East as a whole.

3 THE NEED TO SEVERLY RESTRAIN NEW BUILDING

In addition to the data provided above, there is a very strong requirement to reduce the proposed number of new buildings because the climate impacts of all new buildings and their related infrastructure, because

researchers, including some at the University of Kent, have shown that from 2022 to 2050 under current policy, and building all the houses that were in approved Local Plans in 2022, **housing alone would consume 104% of England's cumulative carbon budget** (2.6/2.5Gt [50% chance of < 1.5 ◦C]).
In other words, housing alone would exceed the emissions level to avoid exceeding the 1.5 C temperature rise which is the Legal Target.
(See: A home for all within planetary boundaries: Pathways for meeting England's housing needs without transgressing national climate and biodiversity goals
https://www.sciencedirect.com/science/article/pii/S0921800922002245)

In addition this article shows that Housing expansion also potentially conflicts with England's and Canterbury's biodiversity targets, which has also been emphasised by the Climate change Committee (Net Zero: The Ambition Gap) and others, which demonstrates the importance of not adding to the existing problems.

In contrast, "**transitioning to housing strategies which slow housing expansion and accelerate low-carbon retrofits would achieve lower emissions".**

Hence the target for the Local Plan must be to dramatically reduce the number of proposed new houses, and also ensure that they are built to Passivhaus standard (see below), and accelerate low carbon retrofits.

The paper also warns that policies to protect wildlife will have to be "very effective" if housing is not to undermine the government's big biodiversity target of halting species declines by 2030.
This is because the "processes linked to housing provision are, under current production technologies, powerful drivers of both biodiversity loss and climate change. Twenty-four percent of all threatened species on the IUCN Red List are threatened by commercial and residential infra- structure expansion (https://www.iucnredlist.org/), and yet more by construction mineral supply chains (Torres et al., 2021, 2022). Infrastructure's climate impacts come from the greenhouse gas emissions embedded in the production, operation and maintenance of infrastructure "
Unfortunately, "Mattioli et al. (2020) identify a range of socio- political dynamics that lock society into a high car use, high ecological consumption pathway."

This is totally unnecessary because "England represents a particularly salient case study, as it simultaneously has abundant housing stock, unmet housing need, and legally-binding environmental policy goals reflecting national contributions to addressing key planetary boundaries (Steffen et al., 2015). England has under-occupied housing stock (see Section 2; Mulheirn, 2019), but one recent estimate suggests up to 7.9 million people currently experience some symptoms of unmet housing needs (National Housing Federation, 2020); predominantly because England has one of the highest rates of housing un-affordability (Downie et al., 2018; National Housing Federation, 2020). "
The situation is made even worse because: "home energy and electricity use represents one-fifth of total emissions (CCC, 2019, p11)", and "shifts towards more equitable consumption of floor space/capita are not mentioned in government strategy, despite having been empirically identified as essential to achieving decarbonisation targets (Serrenho et al., 2019; Hertwich et al., 2020; Pauliuk et al., 2021).
This is particularly relevant because the proposed housing in the Local Plan is predominately larger houses rather than housing suitable for the increasing number of smaller households, as other Local Plan responses have shown.
To make things even worse: "t**here have been no reductions in annual emissions from buildings observed since 2015** (Committee on Climate Change, 2020, p110). Fifty-four percent of all homes in England have energy performance certificate (EPC) ratings of D or worse, and the Committee on Climate Change recommends all homes exceed this standard by 2028 (EHS, 2021). Nearly all require retrofitting to be consistent with the 2050 Net Zero target (EAC, 2021).

Appallingly, for **new builds**, the percentage possessing an EPC band 'A' has varied between 1 and 1.5% each year from 2014 to 2020 (MHCLG, 2021b). Homes constructed today which are not compliant with 2050's net zero goal will have to be retrofitted at potentially prohibitively high future cost (Serrenho et al., 2019). "

"The construction of poor quality housing today also induces 'lock-in' effects, passing additional decarbonisation costs into the future (Serrenho et al., 2019)."
Unfortunately, "**Reducing the operational emissions of existing housing is already recognised as one of the largest challenges in the UK's decarbonisation strategy** (CCC, 2019; Serrenho et al., 2019; RICS, 2020; EAC, 2021; NEF, 2021). However, emissions from new housebuilding are still a substantial contributor (Drewniok et al., 2022b). "

This is also supported by: "Alice Moncaster, a professor of sustainable construction at the University of the West of England, who said: "**From construction generally, we need to move rapidly towards retrofit being the default approach, rather than demolish and new-build. Retrofitting buildings to the current energy standards 'costs' about half of the carbon emissions of the equivalent new building – and yet demolishing 'tatty old' buildings across huge areas of our cities is still the norm.**
"All political parties seem to have got on to the same bandwagon of the need for more new homes to be built. And yet **what should be done first is retrofitting the homes we have that are currently unfit for habitatio**n.

"To curb emissions from bricks specifically, certainly manufacturing all of our own bricks would reduce carbon emissions. But using fewer bricks in the first place would have a huge impact." (See: https://www.theguardian.com/environment/article/2024/may/24/uk-importing-more-bricks-ever-carbon-cost-rising-study).

She also highlights: "Between 2020 and 2022, carbon dioxide equivalent (CO_2e) from shipping imported bricks increased by 54%. This rise is attributed to an increasing shift to importing bricks from abroad, and especially from outside Europe" (ibid).

Data on the impact of retrofitting shows that: "**By far the most impactful policy for reducing housing's conflict with climate targets is rapid retrofitting of the existing stock (coupled with decarbonising the electricity grid)** – retrofitting all homes to emissions standards of today's new builds by 2035 could avoid 0.8GtCO_2e, equivalent to 32% of the cumulative carbon budget for 1.5 ◦C. Going even further and decarbonising the existing stock entirely by 2050 could save 38% of the budget for 1.5 ◦C. "

Furthermore: "Alongside highlighting the recognised need for deep and rapid retrofitting of the existing stock, our analysis also reveals trade-offs between projected housebuilding as a mechanism for satisfying housing need and achieving national biodiversity and climate goals, empirically supporting multiple studies **showing that reducing per capita demand for floor area from those with space in excess of their needs is essential to achieving sustainability goals** (Serrenho et al., 2019; Pauliuk et al., 2021). "

And: "one key lever for meeting greater housing need whilst minimising housing expansion could be through policies incentivising greater equity in housing space consumption and more efficient use of the existing stock (Lund, 2019). "

The Climate Change Committee has reported on reforms to prepare the countryside for climate change (https://www.theccc.org.uk/2018/11/15/reforms-must-prepare-the-uk-countryside-for-climate-change-and-ensure-that-our-use-of-land-supports-reduced-emissions/) and emphasises that: "Steps should include a substantial increase in the use of wood in the construction of buildings" which dramatically reduce

embodied energy and emissions caused by the alternatives of concrete and bricks.

The Local Plan must be amended to require: *ALL buildings to meet the PassivHaus Standard (or its equivalent)*
This that would ensure all the life cycle emissions are included as well as providing very good quality assurance for the design, construction and performance in use, which the other standards mentioned cannot achieve.
The experience of occupants in the Social Rent Affordable Housing in Norwich, which was covered in the City Council's first Climate Action Conference is described as "'Life changing': the social rent affordable housing helping to cut heating bills in Norwich"(https://www.theguardian.com/society/2022/dec/09/social-housing-heating-bills-passivhaus-goldsmith-street-norwich): "Even on the coldest day of the winter so far, tenants of a pioneering housing scheme say they do not need to turn on their heating. A blast of Arctic air has brought a dusting of snow to the Goldsmith Street housing scheme in Norwich, but inside "it's like summer". At a time of health fears for more than 3 million households struggling to pay for heating, Jayed and his neighbours can provide a glimpse of how much better it would be if the UK's homes were properly insulated and ventilated....these triple-glazed homes with 60cm-thick insulated walls, are saving tenants money."
Also: "other councils and housing associations are building Passivhaus homes. The death of two-year old Awaab Iskwak in mouldy Rochdale flat has exposed the squalid state of much of England's housing stock, with up to 450,000 homes hit with problems of condensation and mould."
And: " **The Passivhaus Trust, which campaigns for the approach, estimates that while on average annual energy bills are capped at £2,500, in a Passivhaus home average annual bills are £947 – more than 62% cheaper.**"

So these are compelling reasons for ALL buildings to be Passivhaus Standard.

This must also apply to the potential new hospital here, see: "Baseline study - implementing the Passive House concept in hospitals
www.passipedia.org/planning/non-residential_passive_house_buildings/ph_hospitals/baseline_study_-_implementing_the_passive_house_concept_in_hospitals".
This is especially important here, because when was the Estates Manger at Kent & Canterbury Hospital, the Fuel and Energy budget was a major part of our costs. Hence we spent a lot of money improving insulation, equipment efficiency and other measures. The ensuing savings released funding for more patient care.
So a Passive Hospital provides a much better environment for patients and saves money, so please ensure that this is in the Local Plan.

The *House of Commons Environmental Audit Committee in "***Accelerating the transition from fossil fuels and securing energy supplies Fourth Report of Session 2022–23 ",(Paragraph 17, Conclusions"** provides a very critical report, which has been summarised by Carbon Brief as saying that: *"A "war effort" mobilisation is needed in the UK to accelerate the transition from fossil fuels, insulate homes and address rising energy costs".*

In terms of excess housing numbers, Dr Sophus O.S.E. zu Ermgassen's report (above) says: "Government house-hold and housing stock data show that the UK **has a surplus of dwellings relative to households.** This surplus has grown from 660,000–1.23 million homes from 1996 to 2019 (Mulheirn, 2019)." Also, "Using figures from the English Housing Survey, the researchers estimate that there are 1.2m empty or underused homes.
In recent years the number of new households has been consistently outstripped by additions to the housing stock (ibid).

Even if there are housing supply constraints, evidence suggests that expansion of the housing stock may have a limited effect on housing affordability. Estimates of the sensitivity of UK house prices to increases in housing stock consistently show that a 1% increase in housing stock per household delivers a 1–2% reduction in house prices (Auterson, 2014; Oxford Economics, 2016; MHCLG, 2018). This is minimal in the context of a 181% increase in mean English house prices from 2000 to 2020 (£84,620–£253,561; HMLR, 2022). ”

A major impact of current policies is: “Beyond the question of general housing shortages, it is more universally agreed that there are shortages in social rent affordable housing which targets the needs of those struggling to afford market-rate homes or rents.
Recent estimates suggest there is currently a need for an additional 1.6 million dwellings at social rent affordable rent (National Housing Federation, 2020).”

Canterbury's own situation is that it has the highest rate of homelessness in Kent. The England rate of rough sleeping per 10,000 households is 1.1 for England but 1.5 in Kent, and Canterbury is the highest within Kent.
Pleasingly the number of empty homes went down in 2022 (englandlongtermemptyand2ndhomessortatoz2022.pdf from https://www.actiononemptyhomes.org/facts-and-figures) but only by 12, and second homes increased by four times that number.

The Council's recent doubling of Council Tax on second homes means that more homes are likely to be offered for sale or rent, thus increasing the supply of such houses.

Also one in 29 homes are empty, so action on that would also increase available housing numbers, and if all the houses carried over from the current Local Plan are built, that will increase total housing availability.

So there is a clear need for more social rent affordable housing, especially in the current economic situation, because Social rent affordable housing are the **only type of housing where rents are linked to local incomes**, making these the most affordable homes in most areas across the country. Rents for social rent affordable homes are significantly lower than private rents, and rent increases are also limited by the government, which means homes should stay affordable long-term so people aren’t priced out of their communities by rising rents.
While the way social rents are set isn’t perfect, they should always be affordable to local people, including people on low incomes.
Finally: “one key lever for meeting greater housing need whilst minimising housing expansion could be through policies incentivising greater equity in housing space consumption and more efficient use of the existing stock (Lund, 2019).”, and
“Densification can also play an important role in reducing both carbon emissions and biodiversity impacts by reducing urban land-take and reducing car-dependency (OECD, 2020, 2021). “

Additional evidence on the importance and need for social rent affordable housing is shown by the abysmal performance of a £21bn government programme to build more affordable housing in England which is missing its target by 32,000 homes with big shortfalls in rural areas (https://www.theguardian.com/society/2022/dec/07/englands-affordable-housing-scheme-falls-32000-homes-short-of-target).
The national picture shows that numbers waiting for such housing are the highest since 2016, and there are rising concerns about safety, such as the death of two-year-old Awaab Ishak from mould in a social rent affordable housing property in Rochdale.

This should not be happening, because building homes for social rent offers best value for money by slashing the need for costly temporary accommodation.
So the Local Plan must increase the proportion of social rent affordable housing in the revised Plan.

Also there is nothing about reducing emissions of existing buildings, infrastructure etc., which should be a key part of the Local Plan.

For example, a Clause stating that: "planning permission will only be given for a development if an equivalent number of houses are retrofitted to reduce emissions" must be included all new houses.

This is especially important because Transitioning to housing strategies which slow housing expansion and accelerate low-carbon retrofits would achieve lower emissions.

The Climate Change Committee (CCC) wrote to the Chancellor of Exchequer on 9/11/2022 about Reducing energy demand in buildings, and although sent to the Government, most of its conclusions are relevant to Canterbury District Council.
They said:
"Households will continue to accrue the benefits of these improvements for years to come, including through lower bills, greater thermal comfort and better health outcomes. The Institute of Health Equity estimates that the **NHS spends at least £2.5 billion each year treating illnesses derived from people's living conditions, a high proportion of which are directly linked to living in cold and damp homes.** "
So it is essential that the City Council includes in the Local Plan requirements for developers to pay for upgrading existing buildings in the district, by setting up a Loan Fund to enable funds to be re-used as recipients pay back loans over time.

Also:
"**Facilitating access to private finance**. Our updated analysis suggests that over 60% of households can achieve levels of energy efficiency that are compatible with Net Zero for less than £1,1002 " (2 This originally formed part of our Sixth Carbon Budget analysis but has been updated to account for recent increases in costs of materials and labour.)

Furthermore:
"The technology exists to deliver high levels of thermal efficiency (staying warm in winter while cool in summer) in both existing and new homes, while being moisture- safe and with excellent indoor air quality. Achieving this requires a holistic approach in design, build and retrofit, which is currently not being driven effectively by existing policy. "

<u>Standards</u>
And one conclusion in the letter the Climate Change Committee (CCC) wrote to the Chancellor of Exchequer on 9/11/2022 about Reducing energy demand in buildings says:

"None of these approaches – either for new or existing standards – will work unless they are backed up by **effective enforcement regimes to ensure that standards are met.** "

Unfortunately some organisations and people may suggest that requirements of Passivhaus standard is similar to the, LETI, RIBA Sustainable outcomes and Energy performance certificate level A, but this is wrong.

For example, Passivhaus (PH) requirement is 15kWh/m2 annum,- not 15 to 20 kWh.m2/yr.
In addition PH has the advantage of 20 years of evidence to back up it and tens of thousands of completed

homes and flats to prove it works. It has the highest level of quality assurance too, along with overheating risk assessment and assurance as to indoor air quality.

Dublin council has specified "Passivhaus (or equivalent) for several years now, and no-one has come up with an "equivalent", so this adds to the evidence that it is the best.

The EPC standard is particularly inadequate as noted by the *House of Commons Environmental Audit Committee ("***Accelerating the transition from fossil fuels and securing energy supplies Fourth Report of Session 2022–23 ",(Paragraph 17, Conclusions).**
Anything to do with EPC is inaccurate and does not have evidence of in-use energy consumption, just like VWs dieselgate issue.

Furthermore it is well known that the quality assurance by most developers is very poor.

For example, last year, 2022, the local branch of the Association for Environment Conscious Building (AECB) were invited visit to the City Council's Kingsmead Field development of social rent affordable housing.
Following the AECB site visit, a summary of the attendees considered opinions, was issued to Nicholas Thurston, the former Principal Policy Officer (Climate & Environment) at Canterbury City Council, and distributed to the relevant council members.

This report demonstrated the inadequate quality control of building design and construction, but PassivHaus certification would prevent this, as the design, construction and operational aspects would all have been considered, assessed and certified against the standard.

Even comparing these houses against the building regulations, which are not very stringent, shows that only the roof and the floor met the required standard. The others, wall, Glazing, window & air permeability should have been specified and checked by the designer, but PassivHaus would ensure that the certifier spotted this failing, even if the designer did not.
The Conclusion says it all:
"It is laudable that Canterbury City Council should create affordable homes and have a goal of creating more energy efficient housing. **Regrettably this development is no better in terms of building standards than the average developer project.** The estate has a single feature for the reduction of carbon emissions, air sourced heat pumps. It is highly likely that these homes will cost more to run than the equivalent heated by gas condensing boilers, as heat pumps only come into their own on very efficient buildings.
High efficiency is created by a combination of higher thermal insulation levels, lower air leakage rates, larger areas of south facing glazing, better quality glazing, and higher standards of workmanship, none of which were demonstrated here.
We also have to challenge the energy standards used in conventional energy assessments, as relying on SAP and EPCs to compare buildings is inadequate and leads to the well known 'performance gap'. We need to use much tougher assessment calculations such as the Passivhaus Planning Package and ensure that clients, designers, contractors and trades are better trained and more aware of the problems of current housing.

It is well known that: **A good project starts with a sound brief from the client**. "

So the Local Plan must take much stronger and more effective action, and require Passivhaus Standard for all buildings.
It needs to be ALL buildings and this includes commercial buildings - Dover had its first PassivHaus

offices over a decade ago, and Germany has a PassivHaus Hospital.

Strong evidence for the Passivhaus benefits are provided by the Norwich scheme which was described at the first Climate Conference in Canterbury by the architects of the scheme. Now inhabitants of those houses are very pleased at their performance.
See: **https://www.theguardian.com/society/2022/dec/09/social-housing-heating-bills-passivhaus-goldsmith-street-norwich**

E Vision for the district to 2040

I strongly Object to the reference to "the development of our universities and colleges".
The District is overwhelmed by tertiary education facilities so we do NOT need any more "Growth and Development", except in relation to the effectiveness of their work, such as aligning their courses for the changing needs of society.

The University of Kent has already reduced staffing levels as part of the changes, so this is what tertiary education needs to do.

However the many other education facilities from primary upwards need to be supported, and this should included here.
So this paragraph needs to be re-written as: ..."offering a wide range of jobs through our wide-ranging primary to tertiary education facilities,.... "

The financial resources needed for their changing curricula are obviously less than that needed for expansion, hence the need for more funds, such as from the proposed development in **Policy C12 are unnecessary.**

F Strategic objectives for the district

I strongly Object to the second Objective:
"Support the growth and development of our universities and colleges as a centre of innovation and learning excellence, which stimulates business start-ups and generates skilled jobs."As noted in 1 above, this also needs to refer to **all** the education and training facilities not just tertiary.

In is significant that the "District Wide Key Diagram", page 10, shows new Secondary Schools - but no other education facilities, which is another reason for re-phrasing the Vision and the Strategic Objectives.

G Policy SS3 development Strategy for the District

Paragraph two, says: " A new rural settlement is planned for land north of the University of Kent campus, north of Canterbury, which will provide new homes, jobs, services and infrastructure."

However this is contradicted by Paragraph 1.47 on the previous page which says: "1.47 Areas of the district outside of the urban areas and the rural settlement boundaries are designated as countryside where development will generally be restricted."
This means that the proposed rural settlement north of the University of Kent is unacceptable as it it is in conflict with Paragraph 1.47.

Policy SS3, paragraph 1. (a) makes no mention of "houses available at social rent". These are the

most important category to reduce the Council's homeless waiting list, and should be a key requirement for all new developments.
As is well known "affordable" houses are only affordable to a minority of the population seeking housing, so it is essential that "houses available at social rent" have at least equal priority with other types of housing.

Hence, wherever the term: "affordable housing" is used it must be replaced by terminology that reflects the actual real-life situation that we a currently suffer whereby "affordable housing" is only affordable to those with significant financial resources.
So "affordable housing" must be replaced by "housing with equal proportions of 'market price', 'affordable' and 'social rent' housing".

This will ensure a real improvement in the provision of housing for those who really need it.
This rule must apply wherever the current 'affordable housing' requirements are specified.

So after Paragraph (a) SS3 must also include a new paragraph (a1) "Houses available at social rent must be built as the first phase of the development, together with the relevant transport facilities, such footways, cycle ways and bus services" .
This is essential both to clear the Council's backlog, and also to embed Active Travel and bus use on the site.

SS 3, paragraph 4 says that: Blean is "identified as a Rural Service Centre"
If the proposed University development has services co-located on the new development site this will put Blean's status as a Rural service Centre in doubt, and so risks the loss of existing businesses, which may have taken many years to build into prosperous businesses.

Paragraph 4 also says that: "existing community facilities and services, including within the designated Village Centres, will be protected and enhanced to support the vitality of these important rural settlements."
This means that new facilities on the University site must NOT be permitted otherwise existing facilities such as the well-used Blean Village Hall etc., will be damaged and suffer unacceptable impact.
These impacts will also affect Tyler Hill, whose own memorial hall would be affected, which is also unacceptable, because Paragraph 6 says: " Existing community facilities and services within the countryside will be
protected."

H Land north of the University of Kent

Paragraph 2.16 says: "Significant investment in movement and transportation infrastructure is needed to support delivery of the new rural settlement, including in respect of a high frequency bus service which can connect the site to Canterbury West rail station and the city centre. Improvements will also be required at the A2 Harbledown junction and upgrading at Rough Common Road alongside a range of measures to maximise walking and cycling."
This is appalling for many reasons:
1. The 'investment in movement and infrastructure' will have enormous climate emissions, so is unacceptable.

2. My response to the Draft Transport Strategy (CL DTS) emphasises:
"The new Transportation Strategy, and the new District Local Plan must ensure that all developments are required to be planned to ensure that the need to travel is reduced and **minimised by strategic planning of**

the location of developments."

3. 2.17 says the "settlement will take a linear form ": this means that all the traffic, such as the buses, delivery vehicles, parents of school children will be driving up and down the straight linear roads. In consequence residents will be challenged to be able to easily cross the roads, and are likely to feel unsafe in doing so.
Although crossings could be provided, the linear nature of the scheme means many crossings will be needed, and thus would be liable to bring traffic to a standstill.
Although 2.18 and 2.19 claim that a lot of services will be co-located, that does not help children coming from within a large radius.
In addition if such services are to be successful, it is likely that they would attract motorised traffic from all round north Canterbury.
In such a scenario this could then put existing businesses, such as Blean shop, the Cafe etc. out of business.

4 The 'concept masterplan' on Page 52, shows only two indicative locations for vehicle access, both of which are onto the very busy Canterbury to Whitstable Road, so would create congestion at those junctions.
In addition neither join the existing roundabout at junction with the Rough Common Road, so adding to the potential delays to the Canterbury-Whitstable traffic.
Furthermore, there is no indication of the on-site roads but the 'linear form' is likely to mean roughly north-south orientation.

5 The Crab and Winkle is part of the nationally recognised 1,264 mile National Cycling route 1, which goes from Dover to Tain (Scotland). Its character is well appreciated by a surprising number of cyclists around the country. That appeal and appreciation will be lost if it passes through a housing estate.
The information board outside of Blean Church on the cycle route makes reference to the Salt Road and to skylarks. Will these birds soar over the housing estate?
Blean Church is unusual in being only one of five in the country dedicated to Cosmus and Damian, two Syrian healers. All these churches have wells nearby where pilgrims would bathe to cure them of their illnesses.

It is well used by walkers and cyclists, but if that route is used as a main access for the Site to the Whitstable Road opposite Kent College, then they will stop using it, especially as they will be further discouraged by the urban aspects of the development.

In addition much of the route has trees or hedges beside it, especially the south end where it approaches Kent College. To use as an access road most if not all the trees and hedges would have to be removed, and thus cause a huge loss of mature vegetation which currently absorbs a lot of carbon. The developer may suggest planting new woodland, but trees only reach maximum carbon absorption after 40 years or so, which is way beyond 2050 when we are meant achieve Zero Carbon.

As the Access Road is directly opposite the Kent College Access Road there will be regular traffic jams at peak hours, causing more emissions and air pollution just where young bodies should be protected from such pollution.

So the proposals are totally unacceptable.

It should be noted that there are large developments at Whitstable which are likely to increase traffic on the Whitstable Road and also the South street - Radfall Road connection to Canterbury via Tyler Hill.

So the proposed site will have roads to the west and east of it which will already be congested, and thus cause more emissions, pollution and noise which is totally unacceptable.

I Policy SS4, 2 (e) " upgrades at the A2 junction at Harbledown and at Rough Common Road."

This policy does not say if the road from Harbledown would be upgraded, although that has been stated as a requirement for the development.
All of these would cause enormous climate emissions from their construction, together with even more emissions from their use. It is well known that new or improved roads *increase traffic* so this is completely against the transport Strategy, which is aiming to reduce vehicular traffic!

There is no indication of how to prevent extra traffic using the Blean to Tyler Hill road, which is essential if that road is to be used for safer active travel.
This is further complicated by the University ownership of land on both sides of that road, so it is obvious that if any development is permitted it can only be in the area some distance away from that road, and must not have road to that road.

This is likely to mean the site is unviable as emergency services may require such access, and the proposed sewage treatment works north of that road will be uphill of the development and therefore require pumping causing more climate emissions and costs.

This also means that the development would be largely on sloping sites making the so-called linear development impractical, and this will also make active travel access more complicated.

J Policy SS5 Infrastructure

Paragraph 2 (i) and (j) refer to new and improved waster water treatment facilities and a new reservoir and Country park at broad Oak.
However it says nothing about reticulation. Sewers and mains water pipes are already under great strain. For many years Blean had an embargo on new housing because of sewer capacity. That may have been remedied, but now significant new developments at Blean itself have been approved so will have used that capacity.
Likewise recent burst water mains have occurred in Tyler Hill itself and on Calais, Canterbury and St Stephen's Hills, as well as at Chestfield, causing road closures and great inconvenience to many.
There is no certainty that the undertakers will increase capacity except with very large funding, so this makes the proposed 2000 houses unacceptable.
Furthermore there is no guarantee that the Reservoir can be filled: I was an Objector at the 1979 Reservoir Inquiry, and the Inspector concluded that the River Stour could not fill the reservoir without depleting the River Stour flow below acceptable levels.
Since then, the river flow has decreased year on year, so abstraction from the Stour is liable to severely damage existing fish and in stream biodiversity, contrary to the management requirements of the river, especially for beavers etc.

K Policy C3 Land north of Canterbury West Station

The Concept Masterplan does not provide enough emphasis on the major improvement to Canterbury West Station which is referred to in: **Access and transportation**

The access and transportation strategy for the site should:

(a) Provide a pedestrian access to the station from Roper Road and lay-by for pick up and drop off; and

(b) Improve existing cycle and walking links to the city centre and surrounding residential areas.

This should be included in Paragraph 1 **Development mix,** because it is a major issue, and it would provide multiple benefits for rail use and help reduce climate emissions. This should also include "provision for ticket sales" additional facilities for passengers such as toilets and waiting room, as well as specifying step-free access to the station.

It should also specify that the facilities should be of good quality to provide a welcoming atmosphere for passengers and including those who are less able, and be well signposted in the St Dunstan's area using phraseology that makes it clear that it provides access to all services, otherwise some may think that it is just for trains going East.

L PARK & RIDE

Page 32, Paragraph 2.9 refers to the Park & ride. As my submissions on the Transport Strategy says, there should not be a new Park & Ride as P&R generate more traffic and do not help reduce emissions.

Likewise Page 34 Paragraph 2.14 refers to "The provision of a new 500 space Park and Ride;", which must also be deleted.

Similarly Pages 35 and 36, the Concept Master Plan and Development Mix, for Merton Park must delete the reference to Park & Ride facilities.

M **Policy C11 South West Canterbury Link Road**

As reiterated in my comments on the draft transport strategy, it is well known that new roads generate more traffic, which is completely against the climate and pollution aims of the Plan.
In addition creation of the new slips and associated roads will create huge emissions in themselves, which is also completely unacceptable.
So this proposal needs deleting.

N Policy C17 Land at Canterbury Business Park

it is completely unacceptable for the existing site to be expanded with more buildings because it is highly visible from a wide area and is completely against the AONB purpose and philosophy, and Planning Regulations.

At least one of the businesses there has left and this provides adequate space for any viticulture needs.

It is well known that alcohol has adverse health effects on humans, so refusing support for viticulture would reduce the health demands on the NHS, instead of increasing them.

It is also an equalities issue, and so unacceptable.

O Policy DS20 - Flood risk and sustainable drainage

Sustainable *Urban* Drainages Systems (SUDS) appear to only apply to the urban areas but all developments must have sustainable drainage systems otherwise water courses will be affected by any new development whether they are urban, rural or coastal.

In addition, it is appalling that in Est Kent which suffers regular droughts and restrictions on water use that the draft Plan makes no mention of Rainwater Harvesting !

In this highly water scarce area, it is essential that the Local Plan also has a Policy requiring Rainwater Harvesting for all new buildings.
As well as reducing the demand on the water supply system, it also reduces demand on the SUDS, so provides double savings.
The Water and Sewerage companies will charge less for new infrastructure to supply new buildings with such facilities, and therefore it rewards the developer as well as the building owners.
It is also necessary to ensure that maintenance is provided in perpetuity for these systems.

This is also supported by a government review into surface water management by the Department for Environment, Food and Rural Affairs. (https://www.housingtoday.co.uk/news/government-to-mandate-sustainable-drainage-systems/5121227.article) and "The review recommends implementation subject to final decisions on scope, threshold and process once a full regulatory impact assessment has been completed. The assessment will look at different options and the expected costs and benefits."
The government has accepted this recommendation.

Implementation will also 'future proof' new buildings, as well as providing lower cost water supplies for building occupants and greater supplies for watering plants and hence increasing benefits for biodiversity.

Systems have been developed over many years for a wide range of buildings, so there are no practical reasons to avoid having such systems in new buildings.

It may also be applicable to refurbishment of existing buildings where possible, so a clause requiring this must also be added.

In view of the potential solar farms that may be built during the Plan lifetime, they should also be required to support rainwater harvesting.

As might be expected, Everything You Need To Know About Choosing A Rainwater Harvesting System provides full information about the potential for such systems.

P BIODIVERSITY & NATURE

The already quoted report above on Housing, (https://www.sciencedirect.com/science/article/pii/S0921800922002245) also says: "On the biodiversity side, the 2021 Environment Act commits the government to implementing a **legally-binding target to halt wildlife declines nationally by 2030,** and from late 2023 will mandate that all new developments achieve a 'Biodiversity Net Gain'. Biodiversity Net Gain aims to resolve trade-offs between new construction and impacts on nature. The policy will mandate that all new developments leave biodiversity better off than they found it, as measured using the Biodiversity Metric, a simple habitat-based biodiversity indicator (z Passenger et al., 2021).
However, recent empirical work has demonstrated that the policy's impacts on biodiversity remain ambiguous – planning applications achieving 'net gain' in a set of early-adopter councils were associated with **a 34% reduction in the area of green space** despite claiming a 20% improvement in biodiversity overall, and **major governance gaps were identified,** risking the successful delivery of these promised compensatory biodiversity improvements (zu Ermgassen et al., 2021). Given uncertainty about Biodiversity Net Gain's effectiveness, **preventing unnecessary land use change consistent with the mitigation hierarchy remains essential** (Phalan et al., 2018; Bull et al., 2022)."

Although the Local Plan makes numerous references to biodiversity, and refers to 20% net gain in policy DS 21, this is inadequate to actually improve biodiversity sufficiently.

Furthermore there needs to be a guarantee of that gain being achieved, as noted above, so policies are needed to delineate the requirements to both guarantee that the net gain will be achieved and that it will be maintained in perpetuity.

The Biodiversity Intactness Index (https://www.nhm.ac.uk/our-science/data/biodiversity-indicators/about-the-biodiversity-intactness-index.html See also: Biodiversity Boom or Bust Environmental Audit Committee 2021 Boom or Bust? clpDMK2W.pdf) is such a metric and must be specified in the Local Plan Policies, and that applicants for developments must use it to show that they are achieving their targets, and the target must be at least 90%, to be considered a safe space for humanity.

Depressingly The UK failed to achieve over 14 of the Aichi Biodiversity targets (Biodiversity Boom or Bust Environmental Audit Committee 2021 Boom or Bust? clpDMK2W.pdf) and Invasive species continue to cost the economy £1.8 billion per year.
It also highlights that: "Currently, local authorities do not have enough in-house ecologists to provide the monitoring which is expected to underpin the Government's policy on biodiversity net gain. (Paragraph 80)", so this must be remedied before any development goes ahead.
They make a key point about nature: "Nature recovery does not happen overnight and must be maintained and built upon for generations. The proposed 30 year minimum to maintain biodiversity net gains will achieve little in terms of delivering long-lasting nature recovery. (Paragraph 195) ."

Hence the Local Plan must specify that the 'Support and protection needed to achieve net gain must be maintained in perpetuity'. This is the only way to ensure that the benefits are achieved and continue, and can be achieved with commuted funding.
They also support the view that: "Nature- based solutions could substantially contribute to meeting the UK's net zero goals **but must not be seen as a substitute from the urgent task of decarbonising all sectors of the economy, and in particular, the UK's energy system**. (Paragraph 256)"

It also highlights the need for better action on soils: "*We support the recommendations of the Natural Capital Committee that the development of soil indicators should be fast-tracked; that a shadow target for soil health should be established urgently; and that a legally-binding target for soil health ought to be established as soon as monitoring data allows. Healthy soils should be a priority outcome for the Environmental Land Management Schemes, so as to encourage farmers to adopt beneficial agri-environmental practices.* (Paragraph 105) "
Hence this must be a Policy in the Local Plan.

In, 2022, was the UK's hottest year on record, with the average annual temperature passing 10 C for the first time, and and the daily temperature passed 40 C for the first time. Such heat is now expected every three to four years (https://www.theguardian.com/environment/2023/jan/05/uk-average-annual-temperature-tops-10c-for-first-time).

Prof Richard Allan, at the University of Reading, said: "Higher temperatures in the UK are contributing to more severe heatwaves, droughts and wildfires but also more intense rainfall events and flooding. **These impacts will become progressively worse until global temperatures are stabilised by cutting global carbon emissions to net zero**."

The human impact was thousands of early deaths - this emphasises the need for improved insulation of housing, referred to above, but it also has huge impacts on nature and wildlife.

For example, The National Trust (https://www.nationaltrust.org.uk/services/media/weather-and-wildlife-

2022 AND https://www.bbc.co.uk/news/uk-64107967**)** warns that: “this year’s tumultuous weather is set to become the new ‘norm’ causing a range of impacts for nature if steps aren’t taken to tackle the climate and nature crises. A warm January followed by back-to-back tree-toppling storms in February, a dry spring, a summer of record breaking temperatures and a prolonged heatwave causing severe drought, ending with December’s cold snap, has given UK wildlife a bumpy and difficult year with many species and habitats struggling to cope. The UK is not the only country to have suffered with this year’s weather. Many countries across Europe also baked in the summer heat and wildfires, flooding, hurricanes and typhoons claimed countless lives around the world including in South Africa, Pakistan, California, Japan, The Philippines and Australia. A new record high UK temperature of 40.3 degrees Celsius was recorded at Coningsby, Lincolnshire, on July 19 during the heatwave, helping make this the joint hottest summer on record.
Much of the country was, and still is, gripped by drought after months of low rainfall has yet to replenish groundwater, with the hot, dry conditions over the summer drying up rivers, impacting wildlife and landscapes, damaging crops, affecting livestock and fuelling wildfires, destroying land and homes of nature.”

The Environment Act 2021, includes: “clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste, and includes an important new target to reverse the decline in species abundance by the end of 2030.”

The draft Local Plan should be revised to fully include the latest requirements of the Environment Act.

In particular, the Local Plan must include :
“Long-term (at least 22 years, starting in 2023) legally binding targets on air quality, biodiversity, water, resource efficiency and waste reduction ”

Further information on what the Local Plan should include on biodiversity is provided by Natural History Museum:
https://www.nhm.ac.uk/our-science/data/biodiversity-indicators/about-the-biodiversity-intactness-index.html
This warns that some abundance indicators that might show a stable or even improving species abundance trend, which hides the widespread historical loss of animal and plant populations in countries such as Europe and the UK.
It goes on to say: The planetary boundary framework aims to describe a set of nine boundaries within which humanity can continue to thrive. Only if we stay within these boundaries are we likely to avoid the major shocks to our lives that will occur due to the climate crisis.
Within this framework, if the BII of an area is 90% then it is below what we consider a safe space for humanity.
Hence it is essential for Local Plan to actually identify the current situation and take actions to increase biodiversity accordingly.

Q Proposed Development Sites
The proposed development sites are mainly greenfield, but this shows no recognition of the vital roles provided by greenfield sites.

For example, “**Trees standing alone and in small groups worth billions to UK**” (https://www.theguardian.com/environment/2022/dec/02/a-uk-tree-provides-hundreds-of-pounds-of-benefits-a-year-report-finds).
These trees make up 20% of all the nation's trees, and “These trees are at least as valuable in terms of providing benefits to people as woodland trees and we still aren’t even considering all of the benefits”, so

are a very valuable asset and need increased protection in Local Plan.

Additional evidence on the importance of nature, including trees, is provided in:
NERR094 Natural England Research Report
http://publications.naturalengland.org.uk/publication/5419124441481216
which was updated in 2021, by: **http://nepubprod.appspot.com/publication/5419124441481216**

The importance of this is that it shows in, Fig 1.4, the inter-relation of carbon emissions, nature recovery and green infrastructure.
Critically, for new buildings on greenfield sites, Fig 1.3 shows the very large loss of the carbon stored in the soil caused by disturbance of the soil.
Also Table 2.5, page 17, illustrates that carbon storage in soils down to 1 metre depth is far greater than the carbon in plant material above ground level, which emphasises the importance of not disturbing soil.
So building on greenfield sites causes a huge loss of soil carbon.

Also relevant to soil disturbance are earthworms, and Populations of earthworms in the UK may have fallen by about a third in the past 25 years, an assessment has shown (*https://www.theguardian.com/environment/2022/dec/19/earthworms-may-have-declined-by-a-third-in-uk-study-reveals*).
Earthworms are vital for the healthy soil that underpins all ecosystems and scientists said a large decline would sit alongside concerns about "**insectaggedon**" and the global **destruction of wildlife**.

So the Local Plan must require maximum protection of undisturbed ground.

Also Fig 2.2 below, shows that the carbon storage by woodlands takes a very long time to increase – over 200 years before it starts stabilise.

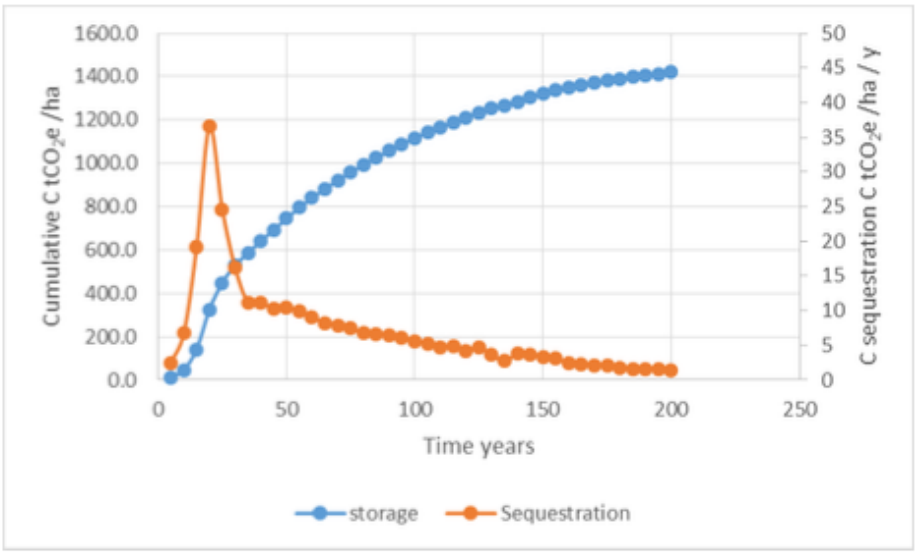

Figure 2.2 Illustration of how carbon sequestration of new woodlands peaks after a few decades, whereas carbon storage increases towards an equilibrium. (Based on Woodland Carbon Code data for un-thinned Yield Class 8 Oak in 5-year time intervals on a mineral soil with minimal soil emissions. Note: the modelling of early growth is limited by a lack of data so the timing and height of the early peak should only be treated as illustrative.)

Sequestration is more rapid, around 25 years to reach peak and then falls rapidly.

In terms of the Local Plan that means any trees planted as a result of the Plan will not reach sufficient maturity in the Plan timescale to achieve full effectiveness.

Note that maximising timber use in construction, such as timber frames and wood fibre insulation, stores the large amounts of carbon sequestered, for a long time. Provided the timber comes from continuously replanted forests means live timber is also sequestering carbon at a high rate.
This is strongly supported by the Climate Change Committee who, four years ago, recommended that: "Steps should include a substantial increase in the use of wood in the construction of buildings," **https://www.theccc.org.uk/2018/11/15/reforms-must-prepare-the-uk-countryside-for-climate-change-and-ensure-that-our-use-of-land-supports-reduced-emissions/**"
More recently, and more simply, they recommend that **all new houses** should be built of timber.

This ambition is supported by PHHomes, who say: "At its best, timber housing offers longevity, healthy and clean working environments – and extremely low upfront carbon footprint (ie embodied carbon). " Also"A timber frame with timber based insulations can achieve more than a 65% reduction in up-front carbon emissions, but over-emphasis on carbon sequestration can disguise excessive timber use". (**www.phhomes.co.uk/ph15-system/** & passivehouseplus.co.uk issue 43).

Importantly for tree planting schemes, **a lot of work is needed to maximise benefits and minimise potential damage of tree planting schemes, so the Select Committee report:**
https://committees.parliament.uk/work/595/tree-planting-and-woodlands/publications/
should be included as evidence for the Local Plan with a requirement for its recommendations to be followed in all proposals.

Also the UK Inter-Agency Climate Change Group (IACCG) showcases some of the very best examples of projects on Nature-based Solutions from across the four countries of the UK (shown on the accompanying map and listed below), and highlights to new audiences how nature can provide important solutions to climate change, both by helping to lock up carbon and by helping us cope with inevitable change.
(https://jncc.gov.uk/our-work/nature-based-solutions-iaccg-case-studies/#:~:text=The%20UK%E2%80%99s%20Nature-based%20Solutions%20in%20action%201%20Keeping,Green%20Infrastructure%20Strategic%20Intervention%20%28GISI%29%20...%20More%20items).

Hence the Local Plan must make require this advice to be used.

R STATE OF NATURE
The massive "State of Nature in Kent 2021" report covers Kent & Medway, but of particular relevance to the Local Plan are the following.
Page 23:
"The State of Nature in the UK and around the world is startling, and scientists warn that we are entering a sixth mass extinction event (the first directly linked to human activity).
Nature is declining at unprecedented rates and that this decline will have grave impacts worldwide as the very foundation of economies, livelihoods, food, health, and quality of life are destroyed. Kent is no exception; species continue to go extinct from the county, and many more are threatened, along with their habitats.
The wealth of varied habitat in Kent supports more than 3,400 rare and threatened species, with some of these nationally rare and some only found in Kent within the UK. But it is not just the rare or endangered that matter; even the most commonplace species
are vital within the wider natural environment, and bio-abundance – as well as biodiversity – is under threat. We are fortunate to live in such a county, but also have a responsibility to hand a thriving natural environment over to future generations."

Nature is in crisis, and we must act now if we are to halt and reverse this trend locally.

Page 26: In the last century, 13 species were lost to Kent or went extinct.
In contrast in this century we have already lost 5 species, demonstrating the more rapid losses occurring now.

Page 27: “The greatest pressure faced by Kent’s wildlife comes from significant and unprecedented levels of growth.
The Kent and Medway Growth and Infrastructure Framework identifies some 178,600 additional homes and 396,300 additional people by 2031 (24% and 23% growth respectively). This, along with the supporting infrastructure required – transport, education, health and social care, utilities and community facilities - all require land and resources. Furthermore, there are pressures on land-use which are specific to Kent’s location, such as proximity to London and as a gateway to Europe, through road, rail, sea and air links.
A growing population needs food, water, and materials, and intensive food production and farming places further pressures on the land.
In addition to these pressures on land use, there are some general trends which, historically, have had a negative effect on the natural diversity of Kent, including:
. Intensification of land management, such as use of chemical fertilisers and pesticides in agriculture, ploughing of semi-natural grasslands, loss of traditional orchards;
. Direct loss of habitats through increased development, urbanisation and over-tidying and other land uses;
. Degradation of soil health and productivity resulting from nutrient depletion, declines in levels of humus, and erosion and compaction of soils;
. A wide range of pollutants, from many sources, that threaten wildlife and have an impact on all habitats, with the most widespread current harm from excess nutrients (phosphate and compounds of nitrogen) in air and water. There has also been a rise in concern over plastic pollution, particularly in the aquatic environment;
. Lack of appropriate management, such as the loss of woodland management as woodland products become uneconomic to extract, or recreational overuse of sensitive areas;
. Habitat fragmentation, which impairs species movement or migration, leading to populations becoming isolated and less resilient to changing climate conditions;
. Invasive non-native species, which can out- compete native species, and pests and diseases, which can have impacts beyond the species they directly attack;
. Climate change – loss of land through sea-level rise, temperature, rainfall and weather pattern change, and other environmental factors alter habitat composition and species movement and survival. Kent is a gateway for species colonising from Europe in response to climate change, including Invasive Non-Native Species (INNS);
. Lack of investment and a drop in public sector expenditure on biodiversity, which in the UK, as a proportion of GDP, has fallen by 42% since a peak in 2008/9.
It will be necessary to respond locally to policy such as the Environment Act and make it work on the ground. “
Page 28, 29: ***Kent’s population is growing at above average rates1,*** *the county has some of the highest rates of house building in the UK1, and the number of* ***vehicles*** *on Kent’s roads* ***increased by 14.3%*** *between 2006 and 2016.*
Levels of **small particulate air pollution** in Kent are **double the World Health Organisation** recommended annual average maximum limit.
Water industry discharges are the **biggest contributor of phosphorus to** Kent’s **rivers and lakes**, followed by agriculture and private sewage treatment plants.
In **2019, 79% of the rivers and lakes in Kent** monitored for phosphorus **did not meet the required standard** for good ecological status as set out under the

Water Framework Directive. (Compared to 67% of water bodies across the South East, and 56% throughout England).
In **2019, 77% of Kent's groundwater bodies did not meet** the required WFD **standard for good chemical status** and two groundwater bodies deteriorated, in part due to the presence of nitrates in the water. (It is a similar picture across England, with nitrate being the most common cause of groundwater test failures).
*The **area of land** under conservation management in Kent **declined by 3.8%** (14,075 ha) between 2016 and 2020. (Losses are mainly due to the expiration of entry level environmental stewardship schemes between 2016 and 2020).*
Page 29: **Fragmentation** and **loss of connectivity** through development in the west of the county, and conversely through **under-management** and scrub encroachment in the eastern half, **have reduced the area of chalk grassland in Kent**.
Only 69% of SSSIs in Kent are in **favourable condition**, while Kent now has 11 Marine Conservation Zones, this does not always mean greater protection, management measures or enforcement is in place.
Of the 3,684 species in Kent that have had their UK threat status assessed, **372 (10%)** of extant species **are classified as threatened with extinction** from Great Britain. This compares with 1,188 (15%) of 8,431 species assessed that are threatened with extinction from the UK as a whole.

It goes to look at the Objectives for improving different habitats, most of which are not being achieved.

On Page 34, it says: "**Objective: New development to better provide for a greener urban environment, through increased urban tree planting, the inclusion of integral wildlife niches, and green building and landscape design.**
Unfortunately:
***"Kent's population is growing at above average rates,** the county has some of the highest rates of house building in the UK1, and the number of **vehicles** on Kent's roads **increased by 14.3%** between 2006 and 2016.*".
This emphasises the need to restrict new building and reduce road vehicles.

Page 37, it notes: "**Kent Biodiversity Strategy lists 387 priority species for Kent, identified as being the most threatened in the British Isles and requiring conservation action.** "

So the Local Plan must take much stronger actions to protect, enhance and maintain nature and biodiversity.

S BROAD OAK COUNTRY PARK
In addition in relation to public access to natural environments, such as the Local Plan proposed **Broad Oak Country Park**, it says:
Page 56: "**Objective:** Whilst there is an increase in the number and quality of opportunities for Kent's residents to connect with the natural environment, **this access is appropriately managed, and impacts from disturbance monitored,** so that the health and wellbeing benefits realised are not to the detriment of the natural environment through increased use and associated recreational disturbance.
Inappropriate engagement threatens Kent's wildlife. In the last 10 years we have seen:
- Increased pressure on wildlife sites and Public Rights of Way (PROW).
- Lack of public knowledge of impact of actions.
- Disconnect with nature leading to lack of care.
- Increases in dog attacks on livestock.
- Increases in fly tipping and littering.

Rural parishes are struggling to combat pressures. "

In the case of Broad Oak, it is vital that it is NOT promoted as a "family day out" with vehicle parking which would exacerbate the intrusion into a natural area of woodlands and open areas. A key concern at the 1979 Reservoir Inquiry was that road traffic would increase as people tried to view the reservoir causing congestion in Tyler Hill and around Broad Oak itself and the Sturry – Herne road, so was a very strong objection.
As managing car parking is a key tool to managing congestion, these car parks must be deleted from the Local Plan.

Equally, the existing PROW network should be maintained, but only improved to meet minimum standards, to minimise intrusion and the area monitored for disturbance.

Finally the global Biodiversity COP 15 meeting last year in Canada, added Agroecology (farming WITH, instead of against, Nature, to Target 10, and they also signed up to a newfound global ambition and commitment to halt and reverse biodiversity loss by 30 % this decade.

So these aspects also need to be in the Local Plan.

T HABITATS DIRECTIVE

With regard to the Habitats Directive, t**he UK High Court has ruled that key European nature conservation laws remain enforceable against the Environment Agency (and by implication other public bodies), despite the UK having left the European Union.**
(See: https://www.freeths.co.uk/2022/09/06/legal-article-landmark-environment-case-environment-agency/Habitats Directive case in the High Court: Harris v Environment Agency**)**

This needs to be recognised in the Local Plan by quoting this ruling.

U POLLUTION

As well as the vital issue of Global Heating, pollution is also a headline issue, because of its effects on human health and well-being, and its impacts on nature and biodiversity.

A key pollutant is nitrogen, and the world's mismanagement of the nitrogen cycle is 'our forgotten environmental crisis' (https://theecologist.org/2021/jul/22/global-nitrogen-time-bomb).
The UK has an outsized impact on the world, and our way of life is profoundly damaging and unsustainable - using up our share of the resources of three planets when we only have this one fragile, heavily damaged, one.
In the case of nitrogen, we are currently fixing at least 300 million tonnes of nitrogen each year - five times as much as the world can bear.
This shows that that applying and fixing nitrogen has huge costs:
Our profligate use of nitrogen fertiliser is a huge contribution to the climate emergency.
Nitrous oxide has 298 times the global warming potential of carbon dioxide and stays in the atmosphere for an average of 114 years and the Haber process producing artificial nitrogen fertiliser is responsible for one percent of global carbon emissions.
And it also means huge ocean dead zones and massive amounts of air pollution. This in turn has major impacts on human health. And harms our ecosystems, causing the loss of many wildflowers, fungi and lichen.
In healthy soils, with low levels of nitrogen, microbes do not metabolise carbon compounds but instead excrete them as polymers that act as a glue holding the soil together, with spaces between the "clumps" through which air, water, roots and mycelium can move.
Without the glue, there's more compaction, loss of fertility, and more flooding.

The **"Chief Medical Officer's Annual Report on Air Pollution for 2022"** (he has not produced a more recent report), includes carbon dioxide as an air pollutant and says **"2022 saw record ever global releases of CO2 into the atmosphere and this maintains the long-term steady upwards trajectory in such emissions. Putting this another way, instead of the vital need to reduce CO2 emissions on a world scale they continue to rise. At the present rate of rise it will only take 9 years for the 1.5C warming target to be surpassed"**.
So this reiterates the section above about the importance of reducing existing emissions NOT adding additional contamination, as the present Local Plan will do.

It highlights the impact of cars: "**at a local level there is a high relationship between emissions from motor vehicles and levels of air pollution**."
Also that: "**London vehicle NO2 emissions are already in excess of pre-pandemic levels."**
This emphasises the need for the Local Plan to actually reduce vehicle numbers, not increase them.
The proposed road developments and Park & Ride will actually increase vehicle movements and even if they are in the countryside the pollution will affect the District and damage nature too.
The Report goes on: **"Air pollution is a matter of life and death, leading to thousands of Londoners a year dying prematurely and developing life-changing illnesses, such as cancer, lung disease, dementia and asthma. And it's especially dangerous for children due to the long-lasting impact on their health and life chances, with children in our city growing up with stunted lungs".**
Worryingly, it adds: "T**he UK is witnessing a rapid expansion of so-called "smaller fulfilment centres", where the picking, packaging, and shipping of on-line orders to the consumer all happens under one roof. In order to be as close to the end consumer as possible and to best enable rapid delivery, these fulfilment centres are moving closer into dense urban areas.**" and "**95% of the vans they use are diesel powered.**"

So all these effects will be felt here and the Local Plan must be amended to ensure effective management of these problems by reducing the sources within the District, such as vehicles as well as heating equipment.

The report emphasises that it can be done (page i):
"**As this report lays out, we can and should go further to reduce air pollution** – and it is technically possible to do so. Improvements in engineering for transport and industry, modifications to agricultural practice and improvements in the built environment are examples that should, once a change is made, be self-sustaining and allow us to reap health benefits for the foreseeable future. Many of the changes to improve outdoor air pollution have significant co-benefits. For example, reducing the use of fossil fuels for energy reduces both air pollution and carbon emissions; improving active travel reduces air pollution emissions from vehicles and has direct health benefits to those who are walking, wheeling or cycling.
In particular, we need to concentrate on the places where people live, work and study; the same air pollution concentration in a densely populated area will lead to greater accumulated health effects than in a sparsely populated area as more people will be affected.
The path to better outdoor air quality is clear, and we now need to go down it."

The Report has useful data, and "**Figure 4 Modelled annual average concentrations of PM2.5 in 2030 based on a 'baseline' (existing agreed government policies) emission reduction scenario**6 " shows that **London Essex and Kent are worst affected, and that Canterbury is visible as being higher than most of Kent at 8 to 9 micro g/cu.m. The most recent, 2021, WHO recommended maximum level is 5 micro g/cu.m, which is not achieved anywhere in Kent.**

This reinforces the need to make great reductions in vehicular traffic if we are to achieve WHO's recommendations.

The Report refers to Low traffic Neighbourhoods (LTN), and says:
"**Low-traffic neighbourhoods (LTNs) reduce traffic and air pollution <u>without</u> displacing the problem to nearby streets, new research from Imperial College, London has shown. LTNs aim to reduce through traffic in residential areas, usually by the use of barriers which prevent cars from using certain streets, while leaving them open to pedestrians and cyclists. This recent research, carried out in inner London residential areas, effectively disproves the argument that low-traffic zones will necessarily cause an increase in traffic and air pollution in neighbouring streets.**"

Hence the Local Plan must be amended to support and implement more of these, as well as ensuring that they are built into all new schemes.

V WASTES

A key issue for the Local Plan is that of wastes, which can also increase pollution, but in addition improving re-use and recycling of wastes could have massive other benefits.

The IET reports (https://eandt.theiet.org/content/articles/2022/06/how-to-cut-carbon-emissions-from-waste/) reports: "Research by Green Alliance shows that improving the use of resources in the construction, vehicles, food and drink, electronics and appliances, and clothing and textiles sectors, could save nearly 200MtCO2e between 2023 and 2032. Some 79.1MtCO2e of those could come in construction through design to reduce material inputs, increased reuse of materials, and switching from high- to low-carbon materials. An 80 per cent reduction in avoidable household food waste could bring another 17.3MtCO2e, while a rise in reuse of electronics to 32 per cent offers 10.2MtCO2e."

It goes on to highlight: "inert wastes from construction, demolition, excavation, and mining activities. These are hard to tackle, but offer considerable carbon savings potential: **construction, demolition and excavation created 137.8 million tonnes of waste** in the UK in 2018, five times that from households."

Furthermore: "Continued use of weight as a metric in resource policies also appears outdated in a world focused on net-zero. Consider Scotland, for example, which has been measuring lifecycle impacts of its household waste since 2011. Data from this year's report shows where we are on waste emissions and how far we must go. Landfill emitted 244,300tCO2e and incineration 171,300tCO2e (the highest recorded), while recycling 'offset' waste carbon impacts by 538,100tCO2e. However, at 5.97MtCO2e, **embodied carbon impacts from material production** are by far the greatest contributor."

So the revised Local Plan must ensure that all possible actions are taken by the City Council and all organisations and people involved with these issue in the District, including Kent County Council, who also have responsibilities in this area.