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Bedford Borough Council  
Borough Hall  
Cauldwell Street  
Bedford  
MK42 9AP

26<sup>th</sup> July 2022

**BY EMAIL ONLY** – email sent to: [planningforthefuture@bedford.gov.uk](mailto:planningforthefuture@bedford.gov.uk)

Dear Sir / Madam,

## BEDFORD BOROUGH COUNCIL – BEDFORD BOROUGH LOCAL PLAN 2040 PLAN FOR SUBMISSION (REGULATION 19) CONSULTATION

CBRE Limited is appointed by the Met Office (hereafter 'our client' or the 'Met Office') to submit representations relating to the Regulation 19 Pre-Submission Draft version of the Bedford Borough Local Plan 2040. The Met Office hold specific land interests in respect to their existing meteorological research station at the Former RAF Cardington, High Road, Shortstown, Bedford, Bedfordshire, MK42 0SY (hereafter the 'Cardington research site' or the 'Site') which is located within the administrative area of Bedford Borough Council (hereafter 'BBC' or the 'Council').

### Submission

Accordingly, please find the following enclosed representations which will be sent via email and secure electronic file transfer:

- This cover letter; and
- Completed Local Plan Response Forms (separate forms for Policies DS1, HOU16, HOU17 and HOU18).

The Met Office as an organisation would not ordinarily need to comment on the scope of an emerging Local Plan. However, in the case of the Cardington research site, the proposed allocations that surround the Met Office interest have the potential to impact the data that is captured there and, in turn, impact its integrity and validity for its own research purposes. Scientific research outcomes from Cardington are fed into the Numerical Weather Prediction models which are at the core of forecasts helping the UK to stay safe and thrive. The Met Office is not anti-development and these representations should not be read in that context. The purpose of the representations is to flag the very real and tangible consequences that could result from the proposed Local Plan.

### Introduction

#### Who are the Met Office?

The Met Office is an executive agency of the UK Government's Department for Business, Energy & Industrial Strategy and is the national meteorological service for the UK. The Met Office provide critical weather services and world-leading climate science helping people make better decisions to stay safe and thrive.

Since its foundation in 1854, the Met Office has pioneered the science of meteorology and its application. To this day, the Met Office continue to push the boundaries of science and technology, so that they can meet the demands of

today and the future. They are a key part of the weather and climate community, uniting scientific leaders from every corner of the globe, delivering extraordinary impact and benefit to the world around us.

## Met Office Site and Surroundings

The Cardington research site is located in South Bedford, to the south of the village of Shortstown and within Shortstown Ward, to the west of the village of Cardington and to the north of the village of Cotton End. The Site is situated to the east of the A600 – High Road, within the southern extent of the former RAF Cardington Airfield. The Site falls outside the settlement boundary of Shortstown and comprises non-allocated land in the countryside. Please see the enclosed Site Location Plan at **Appendix A**.

The Site extends to approximately 15.4 hectares in area (based on the above indicative redline). The existing built form on-site comprises a meteorological research station complete within single storey research building and a collection of freestanding meteorological equipment and associated structures. The Site is not located in a Conservation Area. There are no statutory or locally listed buildings on-site. The Met Office has operated out of the Site since 1925 .

The Site is immediately adjacent to Cardington Studios to the north of the Site which comprises the former airship hangars; Cardington No.1 Shed and Cardington No.2 Shed, which are both Grade II\* listed.

Principal vehicular access to the Site is from High Road via single track internal service roads.

The majority of the Site is located within Flood Zone 1, but a central drain runs west-east across the Site and this area falls within Flood Zone 3. The majority of Site is also located within very low surface water flood risk but the central ditch area and fringes are located in low / medium / high surface water flood risk.

The Site lies within the Forest of Marston Vale area identified as a borough wide initiative for new tree planting. An existing 19.1 hectare Ecological Mitigation Area (EMA) located to the north / north-east of the Site was approved as part of planning permission (LPA ref. 11/02685/EIA as amended) as an ecological area to offset the impact of the proposed development in terms of biodiversity (flora and fauna) and to provide a habitat relocation venue to support development of the South Eastern Land Parcel (SELP) at RAF Cardington.

## Policy Background

Paragraph 35 of the National Planning Policy Framework ('NPPF') (July 2021) sets out the soundness tests for emerging Local Plans:

*“Local plans and spatial development strategies are examined to assess whether they have been prepared in accordance with legal and procedural requirements, and whether they are sound. Plans are ‘sound’ if they are:*

*a) Positively prepared – providing a strategy which, as a minimum, seeks to meet the area’s objectively assessed needs; and is informed by agreements with other authorities, so that unmet need from neighbouring areas is accommodated where it is practical to do so and is consistent with achieving sustainable development;*

*b) Justified – an appropriate strategy, taking into account the reasonable alternatives, and based on proportionate evidence;*

*c) Effective – deliverable over the plan period, and based on effective joint working on cross-boundary strategic matters that have been dealt with rather than deferred, as evidenced by the statement of common ground; and*

*d) Consistent with national policy – enabling the delivery of sustainable development in accordance with the policies in this Framework”.*

The above policy tests will need to be met by BBC if the emerging Local Plan and its strategic and development management policies are found to be sound.

Paragraph 187 of the NPPF relates to protection of existing businesses in respect to effective integration of new development and states:

*“Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established”.*

## **Why Met Office is Responding to the Consultation / Relationship Between Development and Data Collection?**

### **Why is work undertaken at Cardington important to the Met Office?**

The Met Office provides weather and climate related information to businesses, governments and the public, supporting them to make better decisions, keeping UK citizens safe at home and abroad and helping the UK to thrive. The information provided by the Met Office is central in better understanding the challenges presented by climate change.

This work is underpinned by the Met Office Numerical Weather Prediction models, comprising complex computer models of the Earth System that run on supercomputers to provide weather forecasting and climate prediction information. The models are subject to continuous development to improve the accuracy with which it represents the physics of environmental process. These continuous developments in turn lead to improved Services from Met Office to Governments, stakeholders, partners, customers and the general public.

Research observations, such as those undertaken at the Cardington research site, provide an important part of the Numerical Weather Prediction models development process. They provide a ‘ground truth’ with which to understand how environmental processes work, which in turn allows for development of better model representations and more accurate predictions.

### **What is special about the current Cardington site?**

The Met Office has, to date, been able to operate out of Cardington without interruption since 1925. The Cardington research site is well located to study a range of meteorological phenomena that are both difficult to forecast accurately and that are important to Met Office customers and services. These include the forecasting of fog and prediction of near surface temperatures.

Cardington research site is uniquely positioned within the Met Office portfolio to complete this work. Cardington’s relatively flat, semi-rural location offers advantages, as meteorological conditions are not strongly influenced by local surface features (such as built-up areas of housing; landscaping and other features) in important wind directions, particularly in the prevailing south westerly direction. This is important as it allows the Met Office to study the generalised physics of meteorological processes of interest, without undue specificity to the Cardington research site. Moreover, the Site is instrumented with a permanent suite of instruments that operate continuously and cover a far wider range of measurements than found at other Met Office UK surface measurement sites. This comprehensive measurement set, and long record of observations, is key to meeting research requirements.

The Site also has and is benefited from an area of restricted airspace which is managed by the Met Office for the exclusive use of operating tethered balloons and unmanned aerial vehicles (UAVs). The airspace supports an active program for development of UAV-based meteorological sensors, which is an area expected to be of increasing importance in coming years.

In addition to core scientific research activity, Cardington research facility is also frequently used as a site for collaborative projects across the Met Office and with external partners. The combination of existing observations infrastructure, space and on-site expertise makes Cardington uniquely placed within the Met Office for such work.

It should be also noted that the Met Office employ highly skilled employees from the local catchment to undertake the very technical and complicated meteorological research. The Cardington research facility is therefore reliant on this highly skilled local workforce.

### **What will the impact of further surrounding development be on Met Office operations?**

Beyond doubt the proposed future residential developments around Cardington research site will alter the context of the surrounding landscape. Changes to land use type from rural to urban, particularly to the west of the Site which is a key direction in terms of prevailing winds, has the potential to impact lower atmosphere meteorological characteristics, such as turbulence, in complex ways. This increase in complexity could serve to make it more difficult to analyse observations in order to infer generalised understanding of atmospheric processes. As such, there is a strong likelihood that the proposed development could make the scientific validation of measurements, taken at the Met Office Cardington facility, significantly harder due to the increased complexity in their interpretation. This would therefore impact the core Met Office operations and scientific research activities undertaken at the Cardington research site, potentially limiting the Met Office's ability to continue to develop world-leading scientific and technological research and innovation concerning weather prediction.

The Met Office does not wish to block the provision of much needed new homes, however it is imperative that the integrity of Met Office operations is maintained. We look forward to working with the Council and site promoters to understand further details of the respected site allocations and how they may influence the work of the Met Office.

## **Representations**

These representations have been made on the following specific Draft Local Plan policies set out below.

### **Policy DS1(S): Resources and climate change**

Policy is sound. The Met Office support the thrust of this policy and consider to be consistent with paragraph 153 of NPPF which requires plans *"to take a positive approach to mitigating and adapting to climate change"* and ensuring *"future resilience of communities and infrastructure to climate change impacts"*. The policy is also consistent with paragraph 154 of the NPPF and the National Planning Practice Guidance ('NPPG') as it seeks to reduce carbon emissions through location, orientation and design of new development, and emphasises the need to maximise carbon storage and sequestration as well as targeting new development in less vulnerable locations.

The Met Office also highlight the importance of their meteorological research in forecasting changing weather patterns and assessing the impacts of climate change. The Cardington research facility and other regional Met Office research stations play a critical role in gathering valuable regional weather data and assessing the implications of climate change. This supports the UK in adapting to climate change and ensuring communities can become more resilient to the effects of climate change and more extreme weather events in accordance with paragraphs 153 and 154 of the NPPF.

Therefore, the Met Office consider draft Policy DS1(S) to be consistent with national policy and in accordance with paragraph 35(d) of the NPPF.

### Policy HOU16: Land at East Wixams

The Met Office broadly support this housing allocation, subject to the below policy amendment and the Met Office being awarded sufficient time to undertake further technical feasibility work in discussion with the HOU16 promoters to ensure new development in this location does not create “*unreasonable restrictions*” on existing businesses in accordance with paragraph 187 of the NPPF.

Despite this site being located circa 1.32km to the west of the Cardington research site, development in this location could affect prevailing winds and in turn affect the performance and accuracy of meteorological recordings on-site. Further technical work is also required in respect to proposed further tree cover in this area as part of the allocation. As with new built development, tree cover can affect prevailing winds and therefore impact the measurements, reliability and interpretation of scientific data collected at the Cardington research site.

New development in this location should therefore ensure it does not create “*unreasonable restrictions*” on existing businesses in accordance with paragraph 187 of the NPPF.

The Met Office is also supportive of the policy approach of requiring the preparation of a masterplan and design code as part of guiding design, demonstrating planned delivery of new homes and ensuring high quality and effective placemaking in line with paragraphs 8 and 126 of the NPPF, the PPG and Building in Beauty report (February 2020).

The Met Office suggest Draft Policy HOU16 (part i) is amended to include specific mention that “*new development should not place unreasonable restrictions on Met Office operations*”.

In addition, the Met Office require confirmation from the Council regarding the intended status of the masterplan and whether once adopted this would form a Supplementary Planning Document.

Therefore, the Met Office is broadly supportive of the principle of draft site allocation Policy HOU16, however it could raise significant issues relating to meteorological observations and research that need to be understood in more detail. The Met Office are open to an ongoing conversation with the Council and the promoters of this Site to resolve this and ensure Met Office operations at the Cardington research site will not be unreasonably restricted in-line with paragraph 187 of the NPPF.

### Policy HOU17: Land at College Farm, Shortstown

The Met Office broadly support this housing allocation, providing further technical feasibility work is undertaken in discussion with HOU17 promoters. Given the proximity of this site to the Cardington research site, new major development in this location could have impacts on near-surface temperatures, winds and humidity (albeit dependent on wind direction) both during and post construction. As such, there is a strong likelihood that proposed development in this location could make measurements taken at the Cardington research site significantly harder to use scientifically due to increased complexity in their interpretation, thus affecting core Met Office operations.

Further technical work is also required in respect to proposed further tree cover in this area as part of the Forest of Marston Vale initiative, which has the potential (like new built development) to affect prevailing winds which can in turn affect equipment readings and make data interpretation more challenging and potentially less reliable.

New development in this location should therefore ensure it does not create “*unreasonable restrictions*” on existing businesses in accordance with paragraph 187 of the NPPF.

The Met Office is also supportive of the policy approach of requiring the preparation of a masterplan and design code as part of guiding design, demonstrating planned delivery of new homes and ensuring high quality and effective placemaking in line with paragraphs 8 and 126 of the NPPF, the PPG and the Building in Beauty report (February 2020). The preparation of a masterplan and detailed developable area extents and associated parameters e.g. building heights parameter plan etc. would allow the Met Office to undertake further assessments to ensure the proposed development and approved masterplan in this location does not significantly interfere with the Met Office's important meteorological on-site recordings.

The Met Office require confirmation from the Council regarding the intended status of the masterplan and whether once adopted this would form a Supplementary Planning Document (SPD).

Therefore, the Met Office is broadly supportive of the principle of draft site allocation Policy HOU17, however it could raise significant issues relating to meteorological observations and research that need to be understood in more detail. The Met Office are open to an ongoing conversation with the Council and the promoters of this Site to resolve this and ensure Met Office operations at the Cardington research site will not be unreasonably restricted in-line with paragraph 187 of the NPPF.

### **Policy HOU18: Land at Former DVSA Site, Shortstown**

The Met Office broadly support this housing allocation, as it is recognised this development has been previously committed as part of the Bellway Homes New Cardington Fields development.

Therefore, new development in this location should be subject to appropriate and effective engagement with the Met Office as part of achieving well-designed places in accordance with paragraphs 16 and 126 of the NPPF. Furthermore, effective engagement will help ensure new development does not place "*unreasonable restrictions*" on the Met Office's existing operations in line with paragraph 187 of the NPPF.

Accordingly, we suggest that Draft Policy HOU16 is amended to include the necessary caveat that the masterplan and design code should be prepared in consultation with the Met Office to ensure that the limitations created by the proximity of the Meteorological Research Unit at Cardington Airfield are fully considered and the proposed development will not create "*unreasonable restrictions*" on existing businesses in accordance with paragraph 187 of the NPPF. The Met Office suggest the masterplan document should have Supplementary Planning Document status to ensure it benefits from appropriate weight in the determination of planning applications in accordance with paragraphs 129 and 134 of the NPPF.

In summary, the Met Office is broadly supportive of the principle of draft Policy HOU18, subject to the above proposed amendments which are necessary for this policy to satisfy the soundness tests in accordance with paragraph 35 (c and d) of the NPPF.

## **Summary**

As set out in these representations, the Met Office would not ordinarily need to concern itself with the scope of proposals in a Local Plan. However, proposed allocations HOU16 – HOU18 will alter the existing landscape around the Cardington Meteorological Station such that it could hamper the validity and accuracy of important data that is collated from the facility.

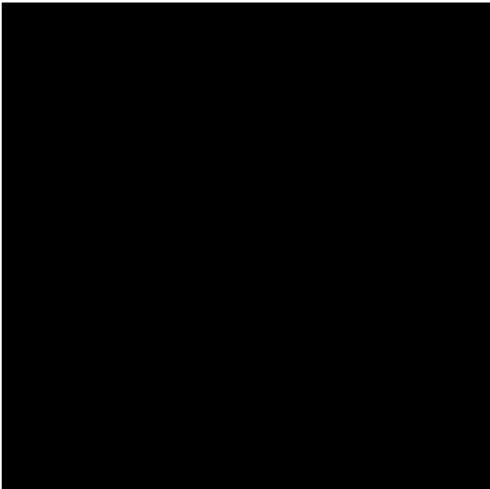
The Met Office do not take issue with the principle of development broadly but need to ensure that their primary interests are maintained for both themselves and for the benefit of all of us that rely on their data. The Met Office is keen to work with BCC and the relevant site promoters to ensure that an effective solution can be found to the issues raised in this response.

The Met Office will continue to engage with BBC as well as key stakeholders, to feed into and inform later stages of the plan-making process including the Examination hearings in due course.

The Met Office will also continue to monitor the progress of the emerging Local Plan and will also look to make written representations on the next stage, Examination hearings in due course. As necessary, we would be happy to enter into a Statement of Common Ground to assist the examination.

We would be grateful for confirmation that these representations have been received, and that they have been registered as duly made. We trust this submission is clear and helpful but should there be any queries please let us know.

Yours faithfully,



## APPENDIX A: SITE LOCATION PLAN



Figure 1: Site Location Plan (Source: Google Maps) – Redline is Indicative