

**Appeal APP/J4423/W/20/3258555:
Land at Moorthorpe Way, Owlthorpe**

**Proof of Evidence for Rule 6 Party Case:
Andrew Wood**

15 December 2020

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1. Summary of Evidence

1.1 Dr Rivers' proof deals with the ecological matters pertinent to the case. Whilst I do refer to ecology in my proof, this is restricted to its planning implications and planning balance, and I have taken Dr River's evidence as read for the purposes of informing my evidence.

1.2 In my view, there are several other matters than ecology where the appeal scheme is in clear conflict with the Development Plan and with national policy. These are as follows.

1.3 Climate Change

The scheme conflicts with Core Strategy Policy CS63 (document CD5.13) and NPPF paras 110(e), 150(b) and 153(b) because, in addition to ecological aspects:

- It results in an unjustified low density form of development in a Supertram-accessible location;
- It increases the population of an area lacking in a walkable local neighbourhood centre without providing one, thereby increasing car dependence and associated emissions, which also puts the scheme in conflict with CS39 (document CD5.10) and NPPF paras 91, 92 and 110(b);
- It makes insufficient provision for electric vehicle charging;
- It does not make good use of the site's characteristics and topography to inform building form and orientation for energy efficiency.

1.4 Effective Use of Land

The scheme conflicts with NPPF para 122, particularly parts (d) and (e), because it fails to make effective use of land by way of:

- the low density of development, which also puts it in conflict with NPPF para 123;
- failing to protect the ecological features of the site, the role those features play in the character of the area, and their potential to enhance the future health and sustainability of the area.

1.5 Open Space

The scheme conflicts with Core Strategy Policy CS47 (document CD5.11), UDP Policy H16 (document CD5.4) and NPPF para 96, because it increases the population in an area that lacks useable public open space, including for children's play, without incorporating acceptable measures to address this need. Reliance on future development of sites C and D to supply these key place-making features highlights why it is inappropriate to regard site E as a standalone development.

1.6 Variance from the Owlthorpe Planning & Design Brief

The appeal scheme has strayed so far from the expectations of the Planning & Design Brief (documents CD5.19 and CD5.20) that it does not contribute to the completion of the Owlthorpe Township, and in my view is harmful to the proper development of the area as a sustainable community. I have provided an illustrative design exercise to demonstrate this aspect of my evidence.

2. Introduction and Declaration

2.1 I am Andrew Wood, Managing Director of Stride Works Ltd, a planning and sustainability consultancy based in Sheffield. I have prepared this proof of evidence in support of the case presented to the Inquiry by the Rule 6 party, Owlthorpe Fields Action Group (OAG).

2.2 I hold a BA Honours degree in Architecture, and a Master of Town Planning degree, both from the University of Newcastle-upon-Tyne. Though not a member of the Royal Town Planning Institute, I have twenty years' experience in environmental, planning and sustainable development policy, and have been a consultant since 2008. I have represented the interests of environmental and community stakeholders in wide range of planning settings.

2.3 I confirm that the facts stated within my evidence are true to the best of my knowledge, and the views put forward are my own opinions based on my training and experience.

3. Climate Change

3.1 NPPF para 150(b) requires new development to be planned for *"in ways that can help to reduce greenhouse gas emissions, such as through location, orientation and design."*

3.2 NPPF para 153(b) states that *"local planning authorities should expect new development to ... take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption."*

3.3 The Core Strategy Policy CS63 sets out the Development Plan's responses to climate change, which include:

b) promoting higher densities of development in locations that are well served by sustainable forms of transport;

c) promoting routes that encourage walking, cycling and the use of public transport;

d) designing development to increase energy efficiency and reduce energy consumption and carbon emissions;

i) adopting sustainable drainage systems;

j) encouraging environments that promote biodiversity...

3.4 Taking these in turn:

b) The site's characteristics are used to justify lower densities than the proximity to the tram would normally indicate. I return to this in Section 9.

c) The Planning & Design Brief (fig 5) indicates a walking and cycling route running along the Northern side of the site, and it is unclear from the submitted plans whether this is included in the appeal scheme.

d) In my view, the variances from the Design Brief will limit the energy performance of the design due to layout and the tendency towards detached forms, as I discuss in Section 9, and this puts the scheme at odds with NPPF 150(b) and 153(b). Further, the

removal of the local shop will increase carbon emissions by inducing many short car journeys. I return to this in Section 4.

i) I am aware of concerns that the SUDS scheme has not been assessed for its potential impact on the ancient woodland, which would make it an unacceptable solution, though I cannot comment on this myself. I suggest that further assessment work is needed to resolve this.

j) As Dr Rivers sets out, the scheme would cause loss of grassland habitats of Local Wildlife Site quality, and partially fragment the ecological network.

3.5 I would accept that CS63 is not strictly a development management policy, insofar as it identifies actions on climate change that would apply to all parties who have agency to act, but does not specify that applications will be tested against it.

3.6 However, this is an allocated site, with a long-standing design brief, and is being promoted by the Council for development. Further, CS63 is complemented by NPPF, by the Council's Climate Emergency declaration¹, and by UK legislation² to indicate that climate action is even more crucial than it was when the Core Strategy was adopted.

3.7 In this context, the completion of Owlthorpe Township is a strategic act, and part of the implementation of the Development Plan, to which development of site E must be seen as an integral, contributory element. As such, in my view, it should be able to show full consistency with CS63. Variance from the Design Brief might be justifiable if this could be demonstrated to improve the outcomes in relation to climate action and CS63, but in fact the opposite appears to be the case: the variances reduce the density, fail to

¹ <http://democracy.sheffield.gov.uk/mgAi.aspx?ID=18587>

² https://www.legislation.gov.uk/uksi/2019/1056/pdfs/uksi_20191056_en.pdf

encourage walking (due to lack of a local shop), and cause significant harm to biodiversity.

4. Walkability

- 4.1 A portion of what is now site E was allocated in the UDP for a local neighbourhood centre. The medical centre has been built, but no other shops. The appeal scheme will develop the remainder of the land that was allocated for the local shopping centre as residential only.
- 4.2 Core Strategy para 4.26 (document CD5.9) states *“the expansion of new housing beyond the existing built-up area will only occur at Owlthorpe, in order to complete the partly built township”*. It is therefore evident that the completion of the township was the spatial objective that led the Core Strategy to support development at Owlthorpe.
- 4.3 To understand the significance of this, we must go to the Mosborough Physical Plan of 1967 (fig OAG_1), which indicates a cellular layout to the Townships, with each community having a local centre within approximately 1km. The local centre of the Owlthorpe Township is marked as number 8 of 18, and I will call it ‘Centre 8’ here.
- 4.4 The need in principle for Centre 8 is provided by Core Strategy policy CS39:
“Neighbourhood Centres are a key to achieving the objectives for successful neighbourhoods. Their role is to provide a basic range of shops and services within walking distance and they provide for basic top-up needs and for people without their own transport.”
- 4.5 In Figs OAG_2 to OAG_5, I have shown the startling effect on walkability of not providing a Neighbourhood Centre at Owlthorpe, by layering 800m radius walking distances around each of the local retail site allocations on the UDP proposals map. By greying out the resulting circles, we can see that there are only a few areas not within 800m of a local shop or Crystal Peaks.

- 4.6 However, if centre 8 is removed (Fig OAG_5), it is clear to see that almost all of the sites C-D-E, Woodland Heights and the whole area we may describe as the incomplete township would be without the basic needs recognised in CS39.
- 4.7 In short, to develop housing at sites C-D-E without a functioning Neighbourhood Centre is entirely contrary to the Mosborough Townships concept, to the Development Plan and to a key tenet of sustainable location of development.
- 4.8 Further, I do not accept that proximity to the Supertram network in any meaningful way compensates for the lack of a walkable Neighbourhood Centre. The reasons for this are obvious:
- No-one should need to take a 5-10 minute walk to a tram, wait for and catch a tram to another location, and then make the return trip for “basic top-up needs”;
 - Very few people with a car would choose the tram for such a journey, because of the comparative time needed, which not only induces many short car trips but also marginalises anyone without ready access to a car;
 - A five-minute walk to a local shop would be within the range that a 10-year old child, or someone with some degree of mobility or frailty issues, would feel safe and comfortable to travel unaccompanied, whereas the tram trip would not. So lack of such facilities significantly harms personal freedoms for many people.
- 4.9 The Planning & Design Brief (PDB) para 5.2.5 recognises this problem:
“The site’s topography results in a substantial uphill walk (from the tram) to the top part of the site and the Medical Centre; especially difficult for people with Mobility problems.”
- In my view this issue - and the resulting conflict with NPPF 110(b) - could easily be resolved by retaining a Local Neighbourhood Centre.

However, the updated PDB is contradictory:

5.2.5 - *“It is no longer proposed to provide further facilities within site E, although it is anticipated that the medical centre will remain.”*

5.12.4 - *"There is a general lack of small-scale food retail in the area and the nearest neighbourhood centre is not conveniently located for the residents of the site or Woodland Heights."*

4.10 It is unclear why the Council appears to have recently rowed back on key principles which underpinned the Townships Plan in 1967 and remained embedded in the Planning & Design Brief 47 years later in 2014. In my view, to do so puts the development not only at odds with the adopted Development Plan, as discussed, but also with NPPF para 91:

"Planning... decisions should aim to achieve healthy, inclusive and safe places which... promote social interaction.... for example through.... strong neighbourhood centres; enable and support healthy lifestyles... for example through the provision of... local shops ... and layouts that encourage walking and cycling."

4.11 This follows on into NPPF para 92:

"...decisions should a) plan positively for the provision of [services] to enhance the sustainability of communities and residential environments; e) ensure an integrated approach to considering the location of housing, economic uses and community facilities and services."

4.12 Within the wider site, a plot adjacent to the Medical Centre within site E is the logical and legible place to locate a shop, as it is at the centre of the wider site, has room for parking and deliveries, and in my view offers a public realm opportunity. The appeal scheme specifically eliminates the possibility of locating a shop there now or in the future, by building houses on it.

4.13 The appeal scheme therefore conflicts with CS39 of the Plan and with NPPF paras 91 and 92, and also performs poorly in relation to NPPF para 110(b).

5. Electric Vehicle charging points

5.1 NPPF para 110(e) requires that *“applications for development should be designed to enable charging of plug-in other ultra-low emission vehicles in safe, accessible and convenient locations.”*

5.2 Whilst this does not explicitly mandate 100% provision, there is clearly a major problem if a new development does not give all new residents equal access to EV charging from first occupation. Namely, the home you choose to occupy has - in this case - only a 30% chance of having EV charging, which limits your ability to choose an EV over a combustion-engined vehicle.

5.3 Under the Government's recently-announced 10-point Climate Plan³, the sale of new petrol and diesel cars will end by 2030, and we would expect to see a progressive uptake of EVs in the preceding years. So during the early years of the development's build-out and occupation, an increasing proportion of residents will be wanting to choose EVs.

5.4 I see no justification for building new homes that are not offering all residents equal access to EV charging, and if parking provision is 100% or over, as proposed in the appeal scheme, then that would logically mean all homes having EV charging. To do otherwise would certainly be against the spirit of NPPF 110(e), even if it is not in strict conflict with the letter of it.

6. Making Effective Use of Land

³ <https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution>

6.1 NPPF 122(d) indicates that making effective use of land involves reconciling considerations that might be, in any given case, more or less in harmony or in conflict with each other :

- the desirability of maintaining an area's prevailing character and setting;
- promoting regeneration and charge.

It would be reasonable and expected to use the Planning & Design Brief (PDB) as the key informant of the area's prevailing character and setting the desirability of maintaining it, and any local agenda for regeneration and charge.

6.2 The Owlthorpe sites are greenfield. Core Strategy Policy CS24(c) (document C5.10) permits development on greenfield land at Owlthorpe as an exception to the policy which otherwise prioritises previously developed sites. Whilst it might be argued that CS24(c) is out of date in the context of an emerging new Local Plan, NPPF para 117 maintains the principle of prioritising previously developed land, and Owlthorpe remains an exception this.

6.3 PDB para Para 4.2.5 explains the rationale for the Owlthorpe exception thus:

- *Development will help enable the completion of the partly finished Owlthorpe township, in accordance with Core Strategy policy CS24c (which);*
- *Development would help to improve the quality and use of adjacent open space and the wider green framework and increase the prospects for developing a neighbourhood focal point, including a local shop, and other facilities;*
- *The sites are close to the high-frequency tram service;*
- *Few other suitable opportunities are likely for housing development of this scale in the area;*
- *The environmental strategy for this area continues to be to integrate a bio diverse, eco-friendly landscape into all existing and future communities and conserve and enhance the local landscape for the benefit of people and wildlife.*

6.4 Considering that the PDB was agreed after the withdrawal of the Policies & Sites DPD, and updated in 2017 just one year before the sites C-D-E were offered for sale, I see no reason not to give the PDB very substantial weight as a material consideration. In that context, I consider that the justifications in 4.2.5 should be treated as the main benefits that developing sites C-D-E should deliver. I have covered 4.2.5 bullets 1 and 3 in Section 4 of this proof, and bullet 5 is dealt with by Dr Rivers. I shall now address bullets 2 and 4.

7. **Green framework, open space and environmental improvement**

7.1 The development will increase the resident population who could enjoy Ochre Dyke woodland. However, it has not been made clear whether there are agreed proposals in the scheme to improve the conservation management and condition of the woodland – to mitigate the impact of extra users and/or as compensation for woodland removal.

7.2 Dr Rivers' evidence deals with the impacts of the appeal scheme on the quality and integrity of the adjacent Local Wildlife Sites, the ecological losses that would occur within the site, and its relationship to the wider ecological network including opportunities for biodiversity net gain. I will not comment on those aspects here, but I will address open space provision.

7.3 Core Strategy Policy CS47 deals principally with quantitative access to open space, rather than specifically its qualities or uses.

7.4 The Officer's report (p18)(document CD2.38) states that "*with the development completed the provision of informal open space will exceed the guideline in the policy but there will be a shortage of formal open space*".

7.5 From my own visits to the site it is evident that the whole area has nowhere for people to sit, play or socialise outdoors. I am told that the grassland space on site E immediately

north of the medical centre is sometimes used informally for this purpose, and indeed this is where I paused to eat my lunch while visiting the site.

- 7.6 The Officer's report (p20) continues by explaining the approach of providing a play area next to site C. The intention is that the play area will *"sit within a park setting incorporating landscaping, a footpath and seating"* and the MUGA, but that these features are contingent on further phases of housing coming forward.
- 7.7 Clearly, therefore, if the appeal scheme is regarded as a standalone development, and further phases do not come forward, then neither will the park. In my view this would be an inadequate outcome for the existing and new residents of the Owlthorpe Township.
- 7.8 The Officer's report also cites NPPF para 96: *"Access to a network of high quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities."* OAG has supplied me with a map (Fig OAG_6) showing the extent of accessibility to open space. This illustrates that the linear greenspace within the overhead power line easement, and the Ochre Dyke woodland trail, are accessible, although I would observe that the woodland trail has no lighting and is unlikely to be an attractive option for many users during darker periods of the year.
- 7.9 There are other grassland areas, but I am informed that the Local Wildlife Site (pink hatching on OAG_6) becomes densely vegetated from spring to autumn, and other areas are fenced off for livestock grazing for around half of each year (yellow on OAG_6). In my view, therefore, the access for all users to a network of high quality open spaces is at present quite limited.
- 7.10 An area of semi-natural park offering safe, accessible opportunity for both exercise and social interaction is therefore sorely lacking. The appeal scheme cannot be considered acceptable as a standalone development, when provision of sufficient quantity and quality of open space is contingent on future phases of development.

7.11 Planning application 00/01355/FUL (document CD4.10.53) concerns *“use of land planting to include woodland, as public open space and buffer screen meadows, bridge access and football pitch”* and the play area proposed in the appeal scheme sits within the boundary of that application. For shorthand I will refer to this as the Site A buffer.

7.12 Page 4 of the Officer's report for that scheme notes *“The proposal represents the implementation of a portion of open space contributions obtained from recent housing developments. Further contributions will be released later for the development of Children’s play facilities elsewhere within the vicinity of the housing developments.”* On p. 6 the report concludes *“The proposals represent a significant benefit to the locality in terms of providing an area of public open space in a location which is accessible to existing residential Communities. They will also result in substantial visual benefits in creating a forest setting for recent and proposed residential developments whilst respecting the presence of existing landscape and ecological features on the site.”*

7.13 The Owlthorpe Planning Brief Master Plan (dated November 1996) is appended to that report, and reproduced as Fig OAG_7 for ease of reference. This clearly shows a play area adjacent to the village centre, on land which is now to the south-west of the site E boundary. To my mind, this shows that:

- public open space on the site A buffer is the intended outcome of previous developer contributions, yet the Officer’s report on the appeal scheme appears to defer that provision to future development of sites C and D (which may or may not happen);
- it was envisaged that future contributions for a play area would produce open space benefits elsewhere within the township, rather than doubling up on a space already presumed by future developments to have been provided as an outcome of previous ones.

7.14 It is hard not to conclude, therefore, that existing and future residents of Owlthorpe Township are being short-changed in terms of quality open space provision.

- 7.15 UDP Policy H16 states that developers will be required to ensure provision is made for:
- a) well designed informal open space, and
 - b) appropriate children's play facilities which are visible from nearby houses but not so close they would cause disturbance, and
 - c) outdoor sport.

Taking these in turn:

- a) The northern boundary buffer is identified as informal open space, but this is provided as an ecological buffer so it does not count towards open space for amenity/recreation purposes. The proposals for the attenuation basin suggest that this would have some amenity value.
 - b) The LEAP would be heavily screened by vegetation on the Moorthorpe Dell side, and would only be overlooked by six dwellings.
 - c) The Council has removed the outdoor sport requirement, making it contingent on future development of sites C and D.
- 7.16 It is therefore questionable whether or not the scheme accords with H16(a) and (c), but it is clear that it does not accord with H16(b) due to the relative invisibility of the LEAP to existing and new homes, which makes it an unacceptable solution.

8. Other opportunities for housing development in the area

- 8.1 It is evident from the HELAA (2020) map (Fig OAG_8) that few other opportunities for housing development in the area are coming forward through the HELAA process, which lends weight to the case for development of sites C-D-E. I do not know whether there are previously developed land opportunities in the area that have not yet come forward.

- 8.2 In my view, the important question is how to ensure that the case for development is balanced with, or integrated with, the ecological and open space issues. The HELAA (paras 3.20 and 3.21) explain that Local Wildlife Sites (LWS) are generally excluded from the HELAA, with exceptions, but it appears to use the 2013 Draft Plan Policies Map as the basis for identifying sites. It is not clear how updates to the identification of sites meeting LWS criteria since 2013 are accounted for.
- 8.3 In light of Dr Rivers' evidence, I consider that Owlthorpe sites C-D-E should be subject to a detailed assessment of their ecological value, to establish whether it is still appropriate for them to be in the HELAA and whether housing development remains acceptable and desirable, or whether nature recovery is a better use of the land.
- 8.4 If it is deemed that housing development is acceptable, that does not diminish the fact of the sites' ecological potential. In that case, effective use of land which offers potential for housing and also for nature and open space should surely aim for the optimal balance of both; and that can best be pursued by a scheme that combines high development density on part of the site with extensive retention of green space. The appeal scheme does the exact opposite of that, filling up the vast majority of the site with a low density form of development.
- 8.5 Consequently, the appeal scheme is also in conflict with NPPF para 123:
"Where there is an existing or anticipated shortage of land for meeting identified housing needs, it is especially important that planning policies and decisions avoid homes being built at low densities, and ensure that developments make optimal use of the potential of each site."

9. Density & Design

- 9.1 PDB para 5.1.2 cites CS26 (document CD5.10) as recommending a density range for the Owlthorpe sites of 40-60 dph. It allows for a lower density *"where the development achieves good design or protects a sensitive area or where development is restricted due to*

site constraints... ". It then refers to the 30-40 dph range shown in the illustrative Masterplan.

- 9.2 However, PDB fig 8 shows that 40-60 dph has been used to give site capacities. For site E, a site area of 3.35 ha is reduced to 2.55 ha being developable for housing. This is then reduced by 10% to accommodate infrastructure, which gives 2.30 ha, resulting in a capacity of 92-138 based on 40-60 dph. There is no indication given as to why PDB Fig 8 and the illustrative Masterplan disagree with each other.
- 9.3 In my view this is a significant reason why the three sites C-D-E need to be considered together. According to PDB Fig 8, the density range set out in CS26 would deliver between 257 and 385 dwellings across the three sites, whereas if they are developed at the density of the appeal scheme they will deliver around 215 dwellings – only 56% of what could be sought for a tram-accessible site under CS26. So if the justification for developing the sites is to deliver much-needed housing within a scarcity of suitable sites, then there is evidently a significant risk of serious under-performance in overall delivery. In my view this weighs against the appeal scheme.
- 9.4 I assume that the reduction from 3.35 ha to 2.55 ha for site E is to fulfil CS 26's provisions to protect a sensitive area; I interpret this to be the woodland buffer. PDB Fig 8 therefore anticipates that 40-60 dph can be achieved whilst protecting the sensitive area, and the remaining justification for reducing density in relation to CS 26 is to achieve good design. That is to say, the benefits of good design should demonstrably justify a reduced density. In the context of Dr Rivers' evidence that the ecological status of the site warrants protection and should carry substantially more weight than it did in the Council's determination of the application, a good design would also necessarily be one in which nature and open space play a much greater part.
- 9.5 Therefore it is necessary to consider whether or not the appeal scheme offers a good enough design to justify reduced density. In my view, it falls well short of doing so, as I explain here.

9.6 The key documents against which to test good design in this case are:

- NPPF Paras 127, 130 and 131;
- the Planning & Design Brief;
- the Sheffield Climate Change & Design SPD (document CD5.18);
- the South Yorkshire Residential Design Guide.

9.7 I have sought here to analyse how the appeal scheme meets the design expectations of these four key references.

NPPF

9.8 Para 127 (e) requires developments to *“optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks”*. As set out in my evidence – and also in light of Dr Rivers’ ecological evidence, I do not consider that the mix of built development, green and public space is appropriate for, or sensitive to, the attributes of the site. Further, by developing the site without a local shop, it does not adequately support local facilities.

9.9 Para 130 states that *“permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions, taking into account any local design standards...”*. This para gives weight to the other three key design references I have used, and by my analysis the appeal scheme is at significant variance from all three, which indicates that permission should be refused.

9.10 Para 131 says *“great weight should be given to outstanding or innovative designs which promote high levels of sustainability...”* In light of the evidence weighing against the scheme, including ecological considerations and insufficient density, it might be argued that an outstanding or innovative scheme could tip the balance in its favour. However,

there is nothing outstanding or innovative I can see in this scheme, comprising as it does standard house types in an unremarkable cul-de-sac layout.

Owlthorpe Planning & Design Brief

9.11 PDB section 6.3 (pages 33-35) sets out the key design principles that development should address. The following points are worth noting.

9.12 L2: *"the development should set a marker for high quality and sustainable design, eg... considered response to solar orientation"*. There is no indication from the proposed layout that solar orientation has informed the design. This applies equally to T2 : *"The layout of homes must consider the weak solar benefit of the site ..."*

9.13 T1: *"Development must be designed as a considered response to the complex and sloping topography of the site"*. The submitted sections give no contextual sense of how the scheme responds to the topography.

Climate Change & Design SPD

9.14 Guideline CC1 Green Roofs states:

"Provided they are compatible with other design and conservation considerations, and where viable, green roofs will be required on all larger developments, and encouraged on all other developments. The green roof should cover at least 80% of the total roof area."

9.15 This is an important consideration because of the range of Core Strategy policies that green roofs can contribute to. Most of these are highly pertinent to Owlthorpe, owing to the topography, the biodiversity opportunity and the potential to attenuate surface water run-off. Para 4.20 shows a clear intent that roofs should usually be either used for solar energy collection or for green roofs. Indeed a 'fabric first' approach that is sensitive to the topography and setting of site E would tend, in my view, to favour green roofs.

9.16 Para 3.7 in the SPD indicates that orientation of dwellings on an east-west axis will maximise solar gain on the south elevation. The appeal scheme appears to achieve this for around 22-25 of the proposed dwellings, so around two-thirds of the dwellings are not optimised for passive solar considerations.

South Yorkshire Residential Design Guide

9.17 A1 Building for Life: *“achieve a score of at least Good (Silver) in a Building for Life assessment (a score of 14 or 15 out of 20)”*. The Design & Access Statement concludes with a very brief self-audit against the Building for Life 12 considerations, but I have not seen evidence of how this translates to the score envisaged by the Design Guide or whether there has been any independent assessment.

9.18 A2.2 Lifetime neighbourhoods: *“making a range of neighbourhood facilities and services easily accessible from people’s homes by continuous, safe and convenient pedestrian movement networks”*. I have covered in Section 4 of my evidence the reasons why I do not consider this is achieved.

9.19 N1.4 Community focal points:

In addition to facilities-based centres all new development should have access to or create community focal points that are well located, accessible and safe and reinforce or extend the network of community focal points within a neighbourhood. A community focal point should also include:

- *Inclusive seating (with seatbacks and armrests)*
- *Space for wheelchairs and scooters*
- *Lighting (not necessarily in addition to street lighting)*
- *A landmark (tree, monument, signage, special building, public activity)*

There is no indication in the scheme of how this is to be achieved.

9.19 N5.7 Connected streets

As far as possible, new streets should be connected at both ends to form a through street. A cul-de-sac should only be used if the following conditions apply:

- *It is the only appropriate design solution*
- *It makes a positive contribution to the character and vitality of the neighbourhood*
- *It maintains pedestrian permeability and acceptable walking distances*
- *It achieves acceptable levels of safety and security*
- *It is short and straight.*

The layout is entirely cul-de-sac based. The cul-de-sacs are neither short nor straight, and there is certainly no evidence that they are the only appropriate design solution. Clearly the removal of the requirement for a through road connection at the western end of the site has a bearing on this, but I can see no consideration having been given to a loop/perimeter layout.

9.20 N6.2 Topography

Streets should be aligned to work with and express the topography.

Align routes:

- *parallel to contours (allowing sufficient slope for drainage)*
- *at right angles to contours*

Routes that run diagonally across contours must be justified with reference to a specific purpose such as:

- *To create a direct connection to a centre or other main destination*
- *To accommodate an existing natural or built feature*
- *To accommodate steeper slopes.*

Buildings should be stepped to accommodate slopes and the resulting roofscape should follow the topography

In general it is preferable to use buildings to accentuate topography rather than counter or 'flatten' it.

The northwest section of the spine road runs diagonally to the contour and misses this opportunity; and the site sections provided are inadequate to enable the resulting roofscape to be assessed.

9.21 B1.1 Plot series and slopes

The arrangement of plots making up a street must respond to topography to promote, maintain or enhance accessibility, local distinctiveness and views.

Use relatively long, narrow, rectangular blocks (or plot series) with long sides parallel to contours to maximise level access to buildings along the contours.

The proposed layout does not achieve this at all, principally due to the propensity for detached and semi-detached dwellings on a curving street layout that is not responsive to the contours.

9.22 B1.2 The perimeter block

By default, development should form perimeter blocks by creating connected streets and maintaining well defined frontages.

Again, the curving spine road with cul-de-sac offshoots does not lend itself to a perimeter block layout. The PDB envisaged a broadly perimeter block form, and it is unclear why the proposal has moved so far away from this default preference.

10. Illustrative Design Exercise

10.1 To illustrate how far the scheme has diverged from the expectations of the Planning & Design Brief, the Residential Design Guide and the Climate Change & Design SPD, I commissioned Cameron Radford, a recent planning postgraduate with substantially better 3D graphics skills than my own, to undertake an experimental exercise in interpreting these key design references from scratch. Mr Radford's brief was to:

- Analyse the design constraints and recommendations given by the key design references;

- Add in the constraints that would result from OAG's suggested conditions for the appeal scheme – namely hedgerow retention and an enlarged woodland buffer;
- Use a sample of an innovative, high density housing scheme to mock-up a potential layout which would perform well against the key design references;
- Also include a shop, open space and a children's play area within site E.

10.2 The visualisations for Mr Radford's work are shown in Figs OAG_9 to OAG_13. The features of his design are as follows.

- a. A building design from the award-winning Goldsmith Street⁴ housing scheme (which achieves Passivhaus building standards) in Norwich, but with an enlarged dwelling size and enlarged garden size to make it more suited to the housing needs of the locality (plot sizes are similar to those in the appeal scheme).
- b. A series of long, linear blocks with flat green roofs that can be seeded with appropriate species that are compatible with the local ecology and in line with the Sheffield Green Roof Habitat Action Plan⁵.
- c. A predominantly east-west alignment of dwellings to optimise passive solar design.
- d. Streets which are broadly either aligned or perpendicular to the land contours.
- e. A linear, interconnected street layout with vehicular roads around the perimeters and an east-west green/play street running right through the site.

⁴ https://www.norwich.gov.uk/info/20296/latest_housing_projects/1929/goldsmith_street

⁵ <https://www.wildsheffield.com/wildlife/a-living-landscape/sheffield-local-biodiversity-action-plan/>

Parking is predominantly front-of-plot (as in Goldsmith Street) but the central green/play street is entirely free of vehicles.

- f. A substantial, focal public space in the centre of the site.
- g. A convenience store next door to the medical centre.
- h. The full NW-SE ancient hedgerow is retained, with two substantial semi-natural public green spaces and a significantly enlarged northern buffer.
- i. The built form, including streets and private gardens, occupies about 1.4 hectares, so over half of the whole site is retained for accessible public green space and nature. These would, of course, be beneficial to all existing residents of the area, and would be entirely additional to the meadow area provided by developer contributions from Woodland Heights.
- j. The design shows 55 dwellings at a net density of 39 dph, though if the larger corner buildings were used as pairs of maisonettes this increases the design to 67 dwellings at 48 dph.

10.3 It must be emphasised that I am not advocating Mr Radford's design as a preferred scheme for the site. It is a hypothetical exercise to show how a considered response to the characteristics of the site and the expectations of the key design references can produce an innovative approach. Such an approach could deliver multiple benefits over the appeal scheme:

- Once the green/play street and green roofs are taken into account, the surface area of the site could remain predominantly permeable for natural drainage, and available for biodiversity;
- An innovative and highly sustainable solution could diversify the housing offer in the area, and could be zero or close to zero carbon with appropriate detailing.
- A substantial improvement to open space and play provision could be delivered without any reliance on future delivery of sites C and D.

- 10.4 In my opinion, Mr Radford has admirably illustrated that it is possible to accept the principle of residential development on the site but to seek a significantly bolder, more innovative solution that works with its setting much better than the appeal scheme does. Such a solution would go a long way to resolving the reasons for refusal of the appeal scheme.
- 10.5 It is important to note, however, that even such an improved scheme as this would still produce a very significant loss to the grassland habitat which, in accordance with Dr Rivers' evidence, meets the criteria to be designated as Local Wildlife Site. As the grassland habitat coincides with the main developable areas of the site, it is my view that the ecological concerns weigh heavily against the principle of development, not only against its details. But the unacceptability of the appeal scheme in detail leads me to conclude that the appeal should be dismissed, irrespective of whether or not the principle of housing development on the site remains.

11. Planning Balance & Conclusion

- 11.1 Based on Dr Rivers' evidence, there are sufficient ecological grounds to refuse the appeal scheme.
- 11.2 My evidence concludes that the scheme will also be harmful in relation to climate change, open space and design, and fails to make effective use of land.
- 11.3 I am not giving evidence on housing land supply, but whether or not there is a 5-year supply in Sheffield, it is clear that there is a relative shortage of suitable development sites in this area of Sheffield. That means there are limited opportunities to fulfil the balanced needs of the area in terms of homes, walkable neighbourhoods, nature and green infrastructure, in order to create healthy, sustainable places.

- 11.4 To allow the appeal site to be developed for a low density scheme that neither responds to the design considerations of the site nor fulfils those balanced needs would, in my view, constitute significant harm that would greatly outweigh the quantitative benefit of delivering houses in the short term. Indeed it would be a tragically wasted opportunity to realise the site's true potential for people and for nature.
- 11.5 Therefore, on balance, the appeal scheme would constitute unsustainable development, and consequently it is my view that the appeal should be dismissed.