Derbyshire Dales Draft Local Plan

This Objection refers to:
Draft Plan pages 212/213 “Policy HC2(v) and DS4 Housing Land Allocations
Site allocation at Land off Gritstone Road / Pinewood Road, Matlock”

Objection to inclusion of the site in the Draft Plan and availability for planning permission

Request for exclusion from the Plan

Request for protection from planning approval and future development

Janet Roberts FRSA, CIPS Affiliate, CIPD Affiliate MSA
(Was resident at number 30 Gritstone Road for 28 years 3 months)
Derbyshire Dales Draft Local Plan
This Objection refers to:
Draft Plan pages 212/213 “Policy HC2(v) and DS4 Housing Land Allocations
Site allocation at Land off Gritstone Road / Pinewood Road, Matlock”
This is the Eastern of the two fields identified in Site Reference SHLAA225 on page 62 of Appendix 2 to the Plan “Site Assessment” (Referred to in this document as SHLAA 225)

This paper is to support and provide reasons for a formal objection to the inclusion of the land identified above in the draft plan, and also with regard to any current or future planning application.

Unfortunately, due to business commitments my husband and I are unable to attend the meeting to be held at 6 pm on 16th March 2016. This paper updates a paper on the same subject which was prepared in January 2013. The situation relating to flood risk remains, and indeed is exacerbated by increasingly wet winters.

This objection addresses the allocation of “Flood risk – green: The site is not affected by identified areas of indicative flood mapping or is located in Flood Zone 1.

We dispute this statement to the extent that the flood risk should be red and is so serious in its potential to affect properties on both sides of Gritstone Road and Bentley Close that SHLAA225 should not just be removed from the plan, but that any current or future applications to build on this land should be refused for the flooding risk alone.

Background to the Author
Janet Roberts Studied Geology to GCE A level and subsequently taught the subject to the same level. Since 1998 she has spent up to 12 weeks each year travelling and studying the geology of the American Western States in particular the volcanic, hydraulic and desert structures. In the past year she was approved as a member of the Mineralogical Society of America. With her husband she jointly owns an American company "Mountains Deserts and Minerals LLC". As a resident of 30 Gritstone Road for more than 28 years she has been able to study the land in question closely and in all weathers. Mrs Roberts moved from 30 Gritstone Road on 2nd November 2015, as a result she has no direct interest in the proposed development of or potential planning applications.

Background
The Topography section of the assessment states
From the west of site slopes towards the east. Rolling landscape.
This is misleading. The land in question forms a micro-environment which has very distinctive features which are not addressed in the assessment. Indeed this micro-environment should be considered as an entity which is separate and has different characteristics from SHLAA224 where different where Geological conditions apply. For example there is no spring line in this particular section of the site which is in the form of a clay "cap" on basalt and quartz.
Far from being "rolling landscape" from the bend in Sandy Land at (OS sheet 119) Ref: 312614 (the bend in Sandy Lane) the land slopes towards the properties along the north and east sides of Gritstone Road and Bentley Close. The contours on the map show a raised
area of land which amounts to a sharp rise in height of more than 40 metres between the houses in Gritstone Road and the proposed NW corner of the site. All of this steeply raised area drains directly towards the houses in Gritstone Road and Bentley Close. The Eastern side of the raised area which drains into a small water course is not included within the curtilage of the site.

It is this drainage pattern which appears not to have been taken into account in the sustainability appraisal which applies to the micro-environment of the SHLAA225 land. The lie of the land and the consequent drainage pattern already lead to a number of problems for the residents on the north side of Gritstone Road, problems which would be considerably exacerbated by the proposed development of the land SHLAA225. It has been noted that the precise nature of the drainage or the singular implications which result from the geological structure appears not been recorded in the assessment.

**Geological Base**

The difficulties which are encountered by the current residents of the North side of Gritstone Road arise from the precise geological nature of this piece of land. The properties numbered 2 to 32 were built in 1939. It was not until sometime after the properties were built that the nature of the underlying rock structures were fully described. The background to these structures is described in The British Geological Survey (BGS) Publication “The Hydrology of Chesterfield, Matlock and Mansfield District (Geological Map Sheet 112)” [HMSO 2007]

Extracts from this description of the Gritstones are as follows:

“The Millstone Grit [Gritstone] sandstones are typically cemented by quartz overgrowths. The resultant sandstones are closely packed and the combined effect of quartz overgrowths and pressure welding results in low intra-granular porosity. In addition the layers of sandstone are interspersed with layers of basalt which has little to no porosity”.

The item goes on to describe how intergranular clays develop which include kaolin. These arise from the breakdown of feldspar which produces “dissolution porosity.” This occurs “especially near the surface of the zone of weathering”, In essence the weathering of feldspar crystals which have grown over the basalt forms a layer similar to clay. Whilst water can travel through this material its progress is slow. Water is retained over long periods forming water tables in the clay above the Gritstone basalt layer. It is unable to drain away, especially under buildings, where it forms pools which are often stagnant. Water retention in the clay leads to an unstable consistency, especially when it contains a high proportion of water.

The BGS description has been confirmed by field research and samples collected from the block of land SHLAA225. (Please see photographic evidence)

- Photograph 1) Example of layered sandstone and basalt with basalt cap;
- Photograph 2) Example of quartz with pink feldspar crystals prior to the break down into clay;
- Photograph 3) Example sandstone layered between impervious quartz crystals.

In Summary: the raised area which comprises all of the block of land SHLAA225 consists of:

a) A raised area of Gritstone. This consists of interspersed layers of sandstone and basalt overgrown with quartz. This Gritstone has very little to no porosity

b) Lying on top of the Gritstone is a layer of intergranular clay which is approximately 2 metres deep. This clay layer demonstrates a medium degree of porosity with slow drainage.
As the clay layer is shallow (approximately 2 metres) the effect is for rain water to fall, sink barely two metres, then meet the impervious Gritstone. The water then follows its own rule and drains through the slightly more porous clay down the easterly slope through the properties which form the boundary of the SHLAA225 block of land. But as the degree of porosity of the clay is limited, water does not drain away immediately. After heavy rain the effect of the inability of the water to drain down into the rocks is that where it meets the Gritstone layer it spreads laterally through the clay forming a “water table”. which is visible at the surface

In summary the basalt layer with its quartz overgrowth forms an impermeable “cap” on the land to the east of and underlying Gritstone Road. The rounded surface of the land which is raised to a height of around 40m is bisected by the Eastern boundary of SHLAA225. The underlying Gritstone is covered in a layer of clay which is of medium porosity. The result is that all of the rainwater landing on the proposed development site will drain to the west through the 2 metre deep layer of clay, towards, under and through the properties in Gritstone Road and Bentley Close.

Even without further development of the land which comprises SHLAA225, this water table rises and is visible at the surface along the boundary of the Gritstone Road properties (please see photograph 5). It takes a small amount of rain for a “lake” to be formed where the land adjoins the rear of the properties in Bentley Close (please see photograph 4). During most of the past 25 years the raised water table has been a visible feature in every month of the year. The wet summer of 2012 has provided further evidence waterlogging and the limited ability of the clay to adequately drain the land, with water hungry “bog grass” establishing itself (please see photograph 6). The water table rises regularly and visibly under the floorboards of the Gritstone Road properties, which adjoin SHLAA225 sometimes becoming stagnant. In some cases this has necessitated the replacement of damp and water damaged floor boards, whilst in hot summer days the odour of stagnant water is an ever present feature. In 2006 the waterlogged nature of the clay became so bad that the western corner of an outhouse adjoining number 32 Gritstone Road started to sink into the clay and pulled away from the wall of the house. This could be rectified only by costly underpinning work.

The inevitable paving over of the proposed development will have the effect of increasing the surface water runoff towards the properties to the north of Gritstone Road with the considerable risk that the problems of property damage faced in number 32 will be replicated for most of the properties aligned with the Eastern SHLAA225 boundary. Difficulties have already been experienced in obtaining buildings insurance for properties. It is impossible to estimate how severe the increase in water damage created by the development will become. It is certain that the geological structure of the land will have a significant detrimental effect upon properties to the north of Gritstone Road and also in Bentley Close. It is clear that if this development is to proceed, increased water flows will cause damage to properties with the cost remediation difficult quantify. It is naïve to assume that flooding cannot occur at altitudes higher than a flood plain. The author has observed similar situations at altitudes of over 6,000 feet.

The following case study provides graphic evidence of the potential for flooding in Gritstone Road.

© 2016 Janet Roberts FRSA, CIPS Affiliate, MSA
Formerly 30 Gritstone Road, Matlock Derbyshire, DE4 3GB
This document is the property of the copyright holder
It may not be reproduced or transmitted by any means electronic or otherwise
Without the written permission of the copyright holder
Case Study
In 2004 the owners of numbers 30 and 32 Gritstone Road received planning permission to build substantial extensions to the rear of their properties. Planning Regulation H3 (3) requires that rainwater from properties shall discharge to:
(a) An adequate soak away;
(b) A watercourse; or
(c) A sewer.

As the building was being undertaken the Building Inspector required that, in compliance with Building Regulation H3(3) rain water from the new (rear) roof area of both properties should not be allowed to drain into a sewer but should be fed into soak always to the rear of both properties (Please see photograph 7). The required dimensions of each soak away were 2m x 2m x 3m. In the event the depth was just over 2m as this was the level at which the Gritstone was reached thus limiting the available depth. On enquiring of the Inspector he advised that the water would “disperse”. Indeed this happens. However water being unable to find its way down through the Gritstone follows the slope of the underlying rock, travelling under the two properties and draining across the pavement into the road (Please see Photograph 8). This is a year round problem, the “dispersal” being most obvious during the summer months where, due to the slow rate of drainage through the clay there is rarely any month when water is not visible draining across the pavement.

Whilst building was taking place place the basalt layer and quartz overgrowth was clear and limited options with regard to foundations, options which were approved by the Building Inspector

Implications for the Plan

The assessment of the site as:
“Flood risk – green: The site is not affected by identified areas of indicatie (sic) flood mapping or is located in Flood Zone 1.

Ignores the geology and assumes that because the site is not in Flood Zone 1 it is incapable of flood risk. As drawn, this block forms a micro-environment where surrounding properties already suffer from flood related problems. These arise from the rocks on which the properties are built and relate directly to the precise nature of the underlying geological structure and which have not been taken into account in the Assessment..

The effect of compliance with Regulation H3(3)(a) and installing a soakaways within the curtilage of two properties is already clear and visible for all to see. It is also clear that houses built on the proposed area of land will similarly be required to comply with Planning Regulation H3(3)(a) thereby creating similar problems. The options will be:
a) Each new property will be required to drain all rainwater in a soak away from which it will “disperse”. This dispersal will drain slowly through the clay, down the slope of the Gritstone under and through the properties to the north of Gritstone Road. Flooding problems for existing properties in Gritstone Road and Bentley Close will be exacerbated to a significant extent. Given the experience observed in Number 32 eight years ago it is not unreasonable to suppose that similar, flood related, permanent structural damage to the existing properties is a very likely outcome. These will replicate and exacerbate the problems faced by the residents at number 32 which resulted in a considerable cost to deal with the damage and significantly increased insurance costs. An increase in the number of soakaways to 64, can have no other result in the medium to long term than costly water damage to all of the properties in Gritstone Road and Bentley Close with the associated rise in insurance costs; b) There are no adjacent water courses which could be used
c) Available sewers leading to and down Chesterfield Road are of domestic capacity.

Policy PD8 “The Flood Risk Management and Water Quality” section of the Draft Plan (paras 5.58 – 5.60 (pages 76 to 78) references the Catchment Flood Management Plans and the Local Flood Strategy Risk Management and appears to be based on the Technical Guidance in the NPPF.

However the Policy document states that the Council will only permit development within areas if:

*It will not cause damage or worsen flooding on the site or elsewhere.*

*It appears that the inclusion in the plan of site SHLAA225 contravenes existing Council policy.*

The approach taken in the Assessment fails to take into consideration the detailed guidance on the Planning Portal. The Buildings Regulations 2000, *Approved Document H – Drainage and Waste Disposal*

This document sets out the requirement for soakaways to collect water from roofs, and prohibits (except in exceptional circumstances and at a last resort) the channelling of such water into waste sewers. Sewer sizes for domestic and rainwater drainage purposes are also set out.

It is clear that if approval for development and/or planning permission is given then option H3(3)c could be employed to avoid the demonstrable problems of the installation of soak away water dispersal from the properties on the new development on the land in question. If the Council employs this option to deal with rainwater runoff from SHLAA225 it will be necessary for sewer sizes to be increased in order meet the regulations for rainwater drainage. This is not a problem solely for the developer, despite the Plan noting contributions to the local infrastructure as a “benefit”. It is unlikely that such contribution of the scale necessary to address the problems outlined will be limited to just the developer, indeed mitigation of the flooding problems outlined will be costly to the residents of Matlock as a whole, not just in financial terms at a time of austerity, but in indirect terms such as disruption. It is inevitable that the flooding implications will incur further costs to the Council and more importantly to the taxpayers of Matlock but with no real benefit, this at a time of austerity and cuts to budgets in real terms.

Further, H3 clearly states that “where areas are paved: methods of drainage other than connection to a public sewer are encouraged” It is unreasonable to suppose that any new properties would not involve the creation of a paved areas of considerable size, adding further run off related difficulties to the existing householders in Gritstone Road and Bentley Close.

The relevant details can be found in the Appendix to this Objection

**The Local Plan**

The Sustainability Report states that all development must consider sustainable water management and that increased surface run off must be mitigated where necessary. However it fails to address the problems which are inherent in the micro-environment of SHLAA225 which is plagued by problems associated by water run-off. The development of the land can do nothing but exacerbate the existing problems. Mitigation can be achieved by avoiding the development of the land in question now and for the future, thereby providing certainty and comfort for existing residents with regard to the potential costs of water related damage to their properties.
This report supports the objections made by others. It is interesting to note that there is now clear and recent (4th March 2016) that property values in Gritstone Road have already been affected by the publication of the Plan. This having led directly to a reduction in value of 13.8%

It is however appropriate that two further comments be made. The Plan is heavily biased towards the supply side of the property market with little quantitative analysis of the demand side. The section Strategic Employment Development addresses this in three short paragraphs (4.35 to 4.37 pages 39-40). There is no real assessment of where the purchasers of new houses will work. Indeed the Plan acknowledges the need for commercial and business development but does not state how this is to be achieved. The Plan appears to be predicated on the sales of properties to commuters when acknowledging in paragraph 4.39

*The evidence from the Derbyshire Dales Retail Study Update (September 2015) indicates that Matlock town centre is attractive and well maintained and has a reasonable environment which is only reduced by the level of traffic travelling through. The Plan as a whole can only serve to exacerbate problems on already overcrowded roads.*

The study referred to is dated September 2015, that is prior to the announcement by the Council of its intention to reduce its workforce in the town by approximately one third. Paragraph 4.40 of the Plan states: *The Study considers Matlock town centre to be a healthy centre which acts as a focal point for the wider surrounding area and as such provides a range of national retail operators*

This section appears to be biased as it fails to recognise the loss of small retail traders over the past five years balanced only by the exponential growth of charity shops in the town. The proportion of charity to “for profit” retail must make the conclusions drawn questionable, therefore also question the sustainability of the degree of growth which is proposed. The only conclusion being that the proposed new home will provide “dormitories” bringing little to Matlock in terms of economic growth whilst having the detrimental effect of significant increase in road use, making acknowledged problems worse.

**Conclusion**

Should the proposed development of SHLAA225 be approved by the Council the risks of flood and water damage to the existing residents in the adjoining properties is considerable.

These risks are predicated upon the geological micro-environment of the precise block of land which has been identified. As the risks are geological in nature they will not go away. The key problem is the structure of the land which lies atop the various layers of which Gritstone is comprised. This makes drainage through the underlying rock impossible and leads to lateral and “down slope” water dispersal at a minimal rate thereby forming a surface level water table. This in turn is creates flooding under the properties to the north of Gritstone Road.

Current Planning Regulations require that rainwater be drained into a soak away for each new property and advises against drainage into sewers. There is a practical example of the negative results of the application of this requirement to two properties in Gritstone Road. This takes the form of under-house flooding; run off into the street and damage to property arising from the retention of water in the clay. Water disperses slowly down the Eastern slope SHLAA225. However, the addition of soakaways, collecting and concentrating rainfall
The effect of the proposed development is to place residents of Gritstone Road and Bentley Close at considerable risk of major water damage to their properties of the type which has already been experienced by numbers 30 and 32 Gritstone Road. This is likely to include actual structural damage to buildings which will be costly to repair. It has been noted that the risks set out in this paper have not been identified or addressed in any of the documents which accompany the Plan. Indeed, in places these risks have been determined as “not relevant”.

There is a possibility that the Council might consider the installation of a considerably larger sewer system which meets the standards required to accommodate the rain water run off resulting from the new buildings and paving of the land. Such a rainwater sewer system would incur the Council in considerable costs for no real benefit to the citizens of Matlock.

We have taken the step of informing Councillors personally of the risks and problems which are likely to arise from the release for development of the block of land SHLAA225. We have taken legal advice regarding this matter. We understand that as Councillors have been advised of the risks of flood and rain water runoff related damage to existing property prior to the decision to approve the Plan then claims for compensation are likely to be successful should such damage described occur following approval of the Plan and/or current or future planning applications. Claims could be made by the owners of properties in Gritstone Road and those in Bentley Close. We understand that claims for compensation could be made as a result of damage arising from the approval of block SHLAA225 for development or planning approval. Any such claims could be made from the current land owner, the Council and any future developer. Of course, we would prefer to avoid this possibility.

This written objection requests that the block of land identified as SHLAA225 in the Assessment and Policy HC2(v) and DS4 Housing Land Allocations Site allocation at Land off Gritstone Road / Pinewood Road, Matlock be removed from the Draft Plan and further protected from development at any time in the future.

Janet Roberts FRSA, CIPS Affiliate, CIPD Affiliate, MSA
12th March 2016

Photographs
1) Layered Gritstone showing a capping of basalt (black) which is impervious to water interleaved with layers of permeable sandstone (tan coloured). Collected from SHLAA225
2) An example of quartz overgrowth (white crystalline) on basalt (black) with feldspar crystals not yet weathered to clay. Collected from SHLAA225
3) Sandstone layered between two layers of quartz crystals. Collected from SHLAA225
4) Surface level water table appearing to the north of the properties 26 to 30 Gritstone road and extending into land by 10m
5) Water table above the land surface in the form of a lake on abutting properties to the South west of MPA2 East This lake has been observed for several days every in every month of the year for the past 25 years.
6) Bog grass has established itself demonstrating the slow drainage capacity of the clay layer across MAT 2 East.
7). Site of soak away in the garden of number 30 Gritstone Road. Note that the surface has sunk as the clay liquefies on a regular basis.

8) The soak aways at the rear of numbers 30 and 32 drain under and through the properties reappearing as drainage across the pavement into the road. The installation of the soak aways in the new development is a requirement of Planning Regulation H3. There is no other outcome than increased water drainage through and under the properties on the north side of Gritstone Road. As water for the soak aways cannot disperse down into the underlying rock, but must disperse laterally and down the slope replicating and increasing the problems demonstrated at numbers 30 and 32 along the entire length of Gritstone Road.

Appendix
The Planning Portal
A larger roof area will increase the amount of surface water. It is preferable to keep the extra volume on site, in order to avoid increasing flood risk elsewhere. Rainwater can be kept on site by using a soakaway or some other way of allowing it to soak into the ground (referred to as infiltration) Approved Document H gives advice on where to site soakaways, how large they should be and how they should be built. Where it is impractical to use infiltration (eg. because of nearby foundations, impermeable or contaminated ground, or high groundwater), it is preferable to discharge it to a watercourse or, failing this, to a surface water sewer or, as a last resort, to a combined sewer. Surface water must not be discharged into a foul drain or sewer.

Approved Document H – Drainage and Waste Disposal

H3 RAINWATER DRAINAGE
This Approved Document, which took effect on 1 April 2002, deals with the following requirement which is contained in the Building Regulations 2010.

Requirement
Limits on application Rainwater drainage

H3.
(1) Adequate provision shall be made for rainwater to be carried from the roof of the building.
(2) Paved areas around the building shall be so constructed as to be adequately drained.
(3) Rainwater from a system provided pursuant to sub-paragraphs (1) or (2) shall discharge to one of the following listed in order of priority:
   (a) An adequate soakaway or some other adequate infiltration system; or, where that is not reasonably practicable,
   (b) A watercourse; or, where that is not reasonably practicable,
   (c) A sewer.

The Requirement Guidance
Performance
In the Secretary of State’s view the requirements of H3 will be met if:

a. rainwater from roofs and paved areas is carried away from the surface either by a drainage system or by other means;
b. a rainwater drainage system:
   i. carries the flow of rainwater from the roof to an outfall (a soakaway, a watercourse, a surface water or a combined sewer) rainwater soaking into the ground is distributed
sufficiently so that it does not damage the foundations of the proposed building or any adjacent structure.

Section 2
Drainage and waste disposal

2.2
Surface gradients should direct water draining from a paved area away from buildings. Where the levels would otherwise cause water to concentrate along the wall of a building, a reverse gradient should be created, for at least 500mm from the wall of the building, to divert the water away from the wall.

b. In ground where the water table reaches the bottom of the device at any time of the year;

c. sufficiently far from any drainage fields, drainage mounds or other soakaways so that the overall soakage capacity of the ground is not exceeded and the effectiveness of any drainage field is not impaired