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Planning Policy
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Our ref: NO/2013/104973/SL-01/PO1-L01
Your ref:

Date: 13 May 2013

Dear Cameron

Eden Local Plan: Housing Preferred Sites and Policies document

Thank you for forwarding the above to us for comment, please find outlined in this letter our comments in response.

APPLEBY
AP18 (red) The southern limit of any development on this site would need to be limited to protect the River Eden & tributaries SSSI and River Eden SAC which lies adjacent. There is significant otter activity (European protected species) on this part of the river and they may use habitat up the bank – though the wooded slope. It would also be necessary to consider slope stability with re to development – as there are slips on this slope (current & historic).

A block stone wall has recently been built to minimise the risk of a landslide (particularly during flood conditions) however development that results in the need for further bank protection/hard engineering would be an adverse impact on the interest features of the River Eden SAC. Natural river processes (including natural levels of erosion) are considered desirable to both the SAC and under the Water Framework Directive and the channel through Appleby is already significantly hard engineered.

The NW boundary of **AP17** and NE boundary of **AP12** (i.e. where they back onto "Dowpit Wood" and The Banks") would need ground investigations to confirm stability. This wooded slope forms the bank /valleyside of the River Eden & tributaries SSSI and River Eden SAC. There is significant otter activity (European protected species) on this part of the river and they may use habitat up the bank through the wooded slope.

A block stone wall was built in this vicinity some years ago due to slope instability. Development that results in the need for further bank protection/hard engineering would be an adverse impact on the interest features of the River Eden SAC. Natural river processes (including natural levels of erosion) are considered desirable to both the SAC and under the Water Framework Directive (WFD) and the channel through Appleby is already significantly hard engineered. Under both WFD and the Habitats Regulations the impacts have to be considered "in-combination" with other impacts/development.

PENRITH
P15 – (blue) There is an extensive culvert (tributary of Carleton Beck) near the western boundary of the site and partially within the site. This may be a constraint on site layout but also offers potential opportunity for wildlife & landscape enhancement.

Cont/d..

P26 – (blue) Any development on this site should be designed with a buffer/wildlife strip around the beck and this strip should be free from all built development including lighting.

Domestic gardens should not be incorporated into the buffer zone. The buffer zone should be planted with locally native species of UK genetic provenance / and appropriately managed under an agreed scheme. The buffer zone and river corridor should form a valuable part of green infrastructure.

The National Planning Policy Framework (NPPF), paragraph 109 recognises that the planning system should aim to conserve and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Article 10 of the Habitats Directive stresses the importance of natural networks of linked habitat corridors to allow the movement of species between suitable habitats, and promote the expansion of biodiversity. River corridors are particularly effective in this way. Such networks and corridors may also help wildlife adapt to climate change.

P34 – (blue) A well is located here.

P40 – A significant part of this site is woodland and would require further assessment. Although this is a relatively small block of woodland in itself it is close to the much larger area on the Beacon. There may be potential to enhance this woodland and improve the link to the larger block of habitat on the Beacon.

P53 – (blue) Same comments as for P26 regarding Carleton Beck.

P61 – Thacka Beck is culverted through this site. This will be relevant to site layout/drainage/pollution control.

P65 – There is a narrow corridor of floodplain along Thacka Beck - though mostly above the 1 in 100 year floodplain.

P98 - (blue) There is a wooded strip along the south boundary. Any development should look to protect/enhance this area.

P104 (red) This does have a significant area of broadleaved woodland/scrub. This provides potentially good wildlife habitat and should undergo further assessment before any development is considered within this part of the site. Recommend that the woodland/scrub is retained/enhanced.

ARMATHWAITE
No comments

BOLTON
No comments.

BROUGH
No comments.

Cont/d..

CALTHWAITE
No comments (LCAL2 appears to already be 12 m from the beck).

CLIFTON
LCF2 - There is a well on this site.

CULGAITH
LCU5 prior to site layout investigate the area near the "issues" which lies just outside the site. Need to ensure that any development does not interfere with the source of this watercourse.

GREAT ASBY
Recommend United Utilities are consulted to advise if existing sewerage infra-structure can cope with proposed development. Asby Beck dries up and hence septic tank discharges can be a particular problem here.

No additional comments for LGA1 or LGA2 (beyond what is already in site allocations info).

LGA3 (red) has Burneybeck Sike flowing down the eastern boundary and a small un-named stream flowing down the eastern boundary from a spring just outside the site.

Please see general comments for Penrith P26.GREYSTOKE
No comments re these sites

KING'S MEABURN
LKM2 (blue) - If there is any development proposed on this site, archaeological assessment is likely to be needed as it lies adjacent to a Scheduled Ancient Monument (SAM).

LKM6 - If there is any development proposed on this site, archaeological assessment is likely to be needed as it lies adjacent to a SAM.

LAZONBY
LLZ6 - Harrow Beck flows along the boundary of this site. Comments as for Penrith P26. No comments regarding other sites in Lazonby.

MAULDS MEABURN
LMM2 (red) If there is any development proposed on this site, archaeological assessment is likely to be needed as it lies adjacent to a SAM.

MELMERBY
LME2 lies adjacent to Melmerby Beck which has salmon, trout, bullhead, water vole and otters all of which would need to be protected from any development. Please add same wildlife corridor comments as for Penrith site P26. Note that there may also be a culverted watercourse crossing the SW tip of the site. This might be relevant to development in this corner of the site and will need investigation.

MORLAND
No comments.

PLUMPTON
No comments.

RENWICK
No sites proposed.

STAINTON
LST4 (blue) – Kirk Sike (main river) flows through the middle of this site. A corridor of open space will need to be retained around this feature. (Comments as for Penrith P26). It is believed that otters use this beck and there may be native crayfish present (unconfirmed).

LST5 - Kirk Sike (main river) flows just beyond the eastern boundary. There is also either an open tributary of Kirk Sike near the SW boundary of the site or a culverted watercourse across the middle of the site. Any development should look to provide a corridor of open space (ideally good wildlife habitat) near these watercourses and to consider the potential to open up the culverted watercourse. It is believed that otters use this beck and there may be native crayfish present (unconfirmed).

LST7 – (red) The earthwork/enclosure marked on OS maps is likely to need archaeological investigation and possible protection. The wooded bank should be protected and potential for enhancement should be considered with re to both the quality of the habitat and also the potential to improve the linkage to “Evening Bank Wood” at the SE corner of the site.

RAVENSTONEDALE
LRA2 - The part of this site adjacent to Scandal Beck floods and will require a flood risk assessment for any development. he beck at this site may be a particularly important wildlife corridor as further downstream Scandal Beck becomes part of the River Eden & tributaries SSSI and River Eden SAC as well as Scandal Beck & Stone Gill SSSI, whilst following the beck upstream is another SSSI and a couple of County Wildlife Sites associated with the beck. The river itself has white clawed crayfish and is likely to be used by otters.

Comments as for Penrith P26.

SKELTON
No comments.

WARCOP
No comments on any of these sites

KIRKOSWOLD
No comments.

General comments:
If any application site lies within Flood Zone 2 or 3 defined by our Flood Map / Strategic Flood Risk Assessment as having a medium/high probability of flooding. Paragraph 101 of the National Planning Policy Framework requires decision-makers to steer new development to areas at the lowest probability of flooding by applying a 'Sequential Test'.

Any application site that lies within Flood Zone 2 or 3 defined by the Environment Agency Flood Map as having a medium/high probability of flooding. Paragraph 103, footnote 20 of the National Planning Policy Framework (NPPF) requires applicants for planning permission to submit an FRA when development is proposed in such locations.

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Under the terms of the Water Resources Act 1991, prior written consent of the Environment Agency is required for any proposed works or structures, in, under, over or within 8 metres of the top of the bank of any watercourse, designated a 'main river'.

The Water Framework Directive (WFD) is a piece of EU legislation that requires member states to make plans to protect and improve the water environment. WFD is designed to improve and integrate the way water bodies are managed throughout Europe. Member States must aim to reach good chemical and ecological status in inland and coastal waters by 2015.

WFD applies to:-

- Surface freshwater bodies, including lakes, streams, rivers and canals;
- Transitional water bodies such as estuaries;
- Groundwater's, and;
- Coastal waters out to 1 mile from low tide

It aims to:-

- Implement necessary measures to prevent deterioration;
- Protect, enhance & restore all water bodies;
- Reduce pollution;
- Drive wiser, sustainable use of water as a natural resource;
- Create better habitats for wildlife that lives in and around water;
- For water bodies that are designated as artificial or heavily modified, aim to achieve good ecological potential by 2015;
- Create a better quality of life for everyone;
- Mitigate the effects of floods & droughts.

The Directive sets a target of aiming to achieve at least 'good status' in all waters. WFD reports on over 30 measures, grouped into ecological status and chemical status.
For surface waters there are two separate classifications for water bodies; ecological and chemical.

Ecological status is recorded on a scale high, good, moderate, poor and bad. Ecological status includes:-

- Physico-chem e.g. nutrients, pH, dissolved oxygen, ammonia
- Biological elements e.g. phytoplankton, microalgae, fish, invertebrates;
- Specific pollutants e.g. metals and compounds, organic compounds;
- Hydro morphology e.g. depth, width, flow, structure.

Chemical status is recorded as good or fail. Chemical status includes:-

- Priority substances which present a significant risk to the water environment.

For groundwater, there are also two separate classifications for water bodies; quantitative and chemical. Groundwater status is recorded as good or poor.
We can provide site specific Water Framework Directive advice when sites come through at the planning stage. It is essential that new development does not have a detrimental effect on the water bodies and that it improves and enhances them.

There are several ways in which new developments can achieve WFD:-

- Remove culverts to open up watercourses where possible to enhance the natural

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environment;
- Promote sustainable water use within new building design;
- Promote Sustainable Drainage Systems (SUDS) for all developments;
- Control of diffuse pollution sources;
- Prohibit direct discharges of pollutants into water bodies & groundwater;
- Eliminate pollution of surface waters;
- Avoid inappropriate development in sensitive areas for example, floodplains and groundwater source protection zones which will prevent and reduce the impact of accidental pollution incidents, for example as a result of floods;
- Consider land use and water supply issues and ensure adequate local wastewater treatment capacity;
- Ensure wastewater treatment capacity is adequate for storm water flows;
- Promote good agricultural practice and use best practice to reduce risk of point source or diffuse pollution;
- Carefully plan all storage and handling arrangements for livestock slurries and manures, animal feedstuffs, silage effluent, agricultural fuel oil, dirty water, fertilisers, veterinary medicines, chemicals and pesticides;
- Promote sustainable water use in terms of abstraction and irrigation;
- Manage contaminated run-off from roads, drives and car parks are large runoff-producing areas in the urban environment.

The Groundwater Team have reviewed the Housing: Preferred Site and Policies Consultation Document and would like to make the following comments and observations.

In general, housing development is considered to be at the lower end of the risk scale with respect to the protection of groundwater quality and resources. However, in certain areas and close to certain receptors the risk of development can increase significantly. The vast majority of the preferred sites would appear to be in acceptable locations, although if development in these areas comes forward we would expect site owners, developers and operators to comply with any relevant statutory codes of good practice and to have due regard to our advice and guidance, and to other reputable standards and guidance (e.g. British Standards).

Developers should always refer to our groundwater protection position statements in Groundwater protection: principles and practice (GP3) which is available to download on the Environment Agency website (http://www.environment-agency.gov.uk/research/library/publications/144346.aspx).

The following land allocations are in sensitive environmental settings close to public water supply abstraction.

Penrith North

Sites P18, P28, P28A, P27, P29, P41, P55, P56 (P17)

- All of these sites lie within a groundwater Source Protection Zone 1 for the Fairhill public water supply abstraction.

Sites P23, P24, P30, P54, P58, P72, P96, P97

- All of these sites lie in full, or in part, within a groundwater Source Protection Zone 2 for the Fairhill public water supply abstraction.

Penrith East

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Sites P67, P52, P10, P11

- All of these sites lie in full, or in part, within a groundwater Source Protection Zone 2 for the Beacon Edge public water supply abstraction.

The Penrith Sandstone principle aquifer is the source from which the nearby boreholes draw water for public water supply. In the Fairhill area (Penrith North) the aquifer is expected to be exposed at or close to the surface, with little or no drift cover shown to occur on the geological maps. The presence of drift deposits would normally offer some natural protection to the underlying principle aquifer from activities taking place at the surface. Its absence in this case means that there is little or no natural protection available. Any development will ultimately be founded on the Penrith Sandstone principle aquifer from which the nearby public water supply is drawn.

The presence of the Source Protection Zone 1 highlights the sensitivity of the area. The lack of any natural protection makes the aquifer highly vulnerable to potentially polluting activities taking place at the surface. The development of land within the SPZ1 is undesirable as the risk of pollution is high and potentially irreversible.

We would prefer to see a presumption against development within the Source Protection Zone 1 as this is the most sensitive and vulnerable location it is possible to have with respect to groundwater protection and the prevention of pollution to drinking water supplies.

Whilst residential development is at the lower end of the risk scale, any development will have to have sewerage pipe work and foundations located within the principal aquifer, and it is a fact the sewers can and do leak. Any leaking sewage is likely to go undetected until it is too late and this could render the public water supply abstraction unsuitable for use on a long term to permanent basis.

As a rule of thumb, it is estimated that the replacement cost for potable supply boreholes is approximately £1 million per mega litre of supply per day. The Fairhill abstraction has a daily licensed quantity of 3.3 mega litres per day. The financial implications of contaminating the source of a public water supply are therefore significant.

United Utilities have indicated that the Fairhill abstraction is a primary source providing the water supply for the Penrith area. An increase in the number of dependant water users in the area (through the expansion of housing proposed) will naturally lead to an increase in the value and significance of this resource.

Position statement A2 in the Groundwater protection: principles and practice states: All development must be appropriate to the sensitivity of the site. Where the potential consequences of a development are serious or irreversible we will adopt the precautionary principle to the management and protection of groundwater, particularly in the absence of adequate information with which to conduct an assessment.

The Environment Agency would recommend that development within the Source Protection Zone 1 is avoided, however if other factors determine that these sites should go forward it will need to be considered in any planning application that we will expect higher standards of engineering and mitigation to be employed for any underground works and underground infrastructure.

For example any planning proposal in Source Protection Zone 1 must be accompanied

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by an acceptable hydrogeological risk assessment. Any activities that can adversely affect groundwater must be considered, for example:

- physical disturbance of the aquifer (see also Position statement N8, GP3);
- involve the installation of sewerage within the aquifer (Position statement G8, GP3).

If the risk assessment identifies unacceptable risks then the developer must provide appropriate mitigation. If this is not done or is not possible we will recommend that the planning permission is conditioned or may object to the proposal (Position Statement N7, GP3).

For development on land within Source Protection Zone 2 we would also expect any planning applications to consider the vulnerability of the land and to propose suitable mitigation measures which will be employed to reduce the risk of pollution of groundwater.

We look forward to continuing involvement in your Local Plan.

Should you wish to discuss the contents of this letter, please do not hesitate to get in touch.

Yours sincerely

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Environment Agency
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