



Caerphilly County Borough Local Development Plan

**HG1.25 (FC38) - Navigation Colliery, Crumlin
(Incorporating the Joint Statement Of Common
Ground Between Caerphilly County Borough
Council and Environment Agency Wales)**

Examination 2010

Caerphilly County Borough Council submission

Examination document reference :

ED21

Submission date :

1 February 2010

1 Introduction

1.1 An exploratory meeting into the Caerphilly LDP was held on 8 December 2009. At this meeting the Inspector raised a number of issues in respect of the LDP that either required clarification or further explanation to provide appropriate information against which the Inspector can draw conclusions when undertaking the examination of the LDP. The Council agreed to prepare supplementary papers on these issues to provide the relevant information for the examination. One of the issues identified by the Inspector was Council recommended change to delete the HG1.25 Navigation Colliery allocation from the LDP.

1.2 This paper supplements and draws from two existing Background papers, namely BP6 – Population and Housing (SB31) and BP13 – Broad Level Flood Risk Assessment (SB44), as well as drawing from a further Submission document, namely the Strategic Flood Consequence Assessment - Navigation Colliery, Crumlin (SB54). This paper provides additional information over and above that contained in the existing papers, and it is not intended for this document to reiterate information contained elsewhere.

1.3 At the Exploratory meeting the Inspector raised a number of specific areas where additional information is required in respect of the Navigation Colliery site. This paper will address the issues raised by the Inspector, namely:

- The Rational for the Focused Changes decision against the requirements of TAN15
- The disagreement between the Council and Environment Agency Wales (EAW)
- The implications of the Focused Change in delivering the LDP target for housing and affordable housing, as well as other strategic elements.
- The rationale for retaining the settlement boundary if the site is not allocated for housing
- The implications of the Focused Change for the LDP Strategy, i.e. the uncertainty over whether the site will be brought forward as the site remains within the settlement boundary

1.4 This paper will also address the current circumstances on the site, which have changed since the publication of the deposit LDP and lends support to the council's current position.

2 Rationale for the Focused Change Decision

2.1 The council decision to recommend the deletion of the Navigation Colliery site from the LDP revolved around two factors; firstly a difference of opinion between the council and EAW in respect of further flood consequence assessment work required to satisfy EAW requirements and secondly there was significant uncertainty over whether the allocation was realistic, achievable and deliverable.

Flood Risk Issues

2.2 The council undertook a Broad Level Flood Risk Assessment of the LDP in 2008 (Background Paper 13), which informed the preparation of the Deposit LDP. EAW made objections to the Deposit LDP in respect of the Navigation Colliery site on flood issue grounds. As a result the council commissioned consultants, Entec, to

undertake a Strategic Flood Consequence Assessment (SFCA) for the site. The purpose of the SFCA was to determine whether the consequences of the flooding of the site could be managed.

2.3 EAW were consulted on the final SFCA report in March 2009 and commented that the SFCA failed to demonstrate that the risks and consequences of flooding can be acceptably managed in accordance with TAN15 guidance and was not, therefore, acceptable. EAW cited 3 grounds for this stance:

- I. The SCFA had not demonstrated that the site is flood free during a 1 in 100 (1%) flood with climate change.
- II. The SCFA had not demonstrated that the consequences of flooding during a 1 in 1000 year (0.1%) flood event could be managed within the tolerable conditions advised in TAN15.
- III. The SFCA had not demonstrated that it would be feasible to mitigate the increased risk downstream if the culvert were removed.

2.4 EAW have maintained and restated their position in further correspondence with the Council.

2.5 The Council's position in respect of the grounds of objection is:

- I. The Report accepts that flooding on site occurs from a 50% blockage of the culvert in the 1% flood event and would limit the part of the site suitable for housing development, although some flooded areas may be suitable for recreation and amenity use, or as SUDS. However the report recommends the removal of the culvert. With the culvert removed the report showed that the site does not flood from a 1% flood event. This is the council's preferred option.
- II. The report accepted that a significant proportion of the site would be flooded to some depth in the 0.1% flood event. Those parts of the site where floods reached greatest depth and velocity would be unsuitable for residential or other buildings. Elsewhere the design and layout of development would need to take into account the limiting depths and velocities of flooding. The work carried out as part of the SFCA has identified the flood depths and flow velocities across the flooded areas. However these are detailed design issues that will influence the layout and design of a development and are, therefore, more appropriately considered through detailed planning applications, rather than through the Development Plan, which seeks to establish the principle of use on the site.
- III. The SFCA report demonstrates adequately the downstream flood consequences for the removed culvert scenario appropriate to a strategic level assessment. The SFCA report acknowledges that the removal of the culvert would increase the flooding risk downstream over a scenario that retained the culvert. However the difference between the scenarios was minimal. The main reason for this is that the blocked culvert would result in little attenuation of water due to the fact that water spills out of the channel, returning a short way downstream of the culvert, before the water level reaches the top of the culvert. Whilst more detailed study (more appropriately considered as part of a detailed planning application) would be required to determine specifically the downstream peak water levels, the

work done to date satisfies the principle that the consequences can be managed as they are similar to the existing flood position.

- 2.6 EAW and the council were in disagreement over the need for more detailed work to supplement the SFCA work. EAW maintained their position that the additional work is required to demonstrate that effects of flooding can be managed and mitigated, whilst the council maintained that the level of detail being requested was more appropriate for a detailed planning application, rather than the strategic level of a development plan where the principle of uses are considered, not detailed designs and layouts.
- 2.7 EAW have advised that additional work on the flood modelling of the site and the mitigation/management of downstream flood risk needs to be undertaken in order to satisfy them that the site is suitable for allocation in the LDP. The council contested this point of view, asserting that the current modelling is sufficient to determine, in principle, whether the proposed use for the site is acceptable in terms of TAN 15. It should be noted that TAN 15 recognises that assessing flooding consequences is complex, technically challenging and expensive. It should also be noted that, throughout Appendix 1 of TAN 15, there is an assumption that this work is carried out by a developer at the detailed planning application stage and, importantly, it is carried out at the developer's expense.
- 2.8 The council believe that the detailed modelling work being requested by EAW is be inappropriately detailed for consideration through the LDP Examination. The detailed modelling work would also be costly and the Council is not in a financial position to undertake it and it would also be inappropriate for the council to undertake it. The Council does not own the site and is not in a position to subsidise the development industry in this manner. As a general principle the developer /landowner usually recovers costs incurred through undertaking such work through the realisation of the development scheme. However in the case of Navigation Colliery it is worth noting that there are serious concerns regarding the deliverability of a scheme due to the abnormal costs associated with the renovation of the listed buildings on site. As a consequence the council will not undertake the requested additional work.
- 2.9 Given the position between the council and EAW, there was an in-principle objection to the inclusion of Navigation Colliery as an allocation in the LDP on flood issue grounds.
- 2.10 It should be noted that the above issues have now been resolved with EAW and a Statement of Common Ground has been agreed by both parties that ultimately removes the EAW objections to the allocation of the site for housing. Further details of the agreement are set out in Part 6 of this Paper, whilst the agreement itself is included as Appendix 1. Whilst the flood issues outlined above were a material consideration in the council decision to recommend the deletion of the site from the plan, the change in circumstances means that they no longer support the council's position. However the council remains of the opinion that the site should be deleted on viability grounds.

Site Viability

- 2.11 When preparing the Deposit LDP the site was being considered for residential development. A volume housebuilder, Edward Ware Homes, had progressed plans

for residential development on the site to an advanced stage and the likelihood of realising the development was high due to the prevailing economic climate. However the economic downturn that followed has significant implications in terms of the viability of the site and also led to the volume housebuilder ceasing to trade. With increased viability issues and no developer on board the likelihood of the allocation being realised was very low. As such the council were forced to consider whether retention of the site as a residential allocation would adversely affect the soundness of the plan due to the allocation being unviable, unrealistic and unachievable.

Decision Making

- 2.12 With an outstanding, in-principle objection to the site on flooding grounds, significant concerns over its viability and the fact that the site was not essential in meeting either total housing targets or affordable housing targets, the council was faced with 2 options:
- Firstly to maintain the allocation and rebut the EAW position and objection at the LDP Examination; or
 - Secondly recommend the deletion of the allocation of the site from the LDP so removing the EAW objection.
- 2.13 At the time of making the decision the council considered the importance of the site in delivering the LDP housing and affordable housing targets. In summary the loss of the site is not significant in overall housing provision terms as it comprises less than 10% of the total housing land allocation for the Northern Connections Corridor, whilst the total LDP allocation contains an over allocation amounting to over 20%, which ensures a positive range and choice of housing sites. In respect of affordable housing the site would only realise a small number of units (14) as it is in a low target area and other settlements in the area are already generating significant numbers of units. The full explanation of this position is contained in the supplementary paper “Maximising Affordable Housing”.
- 2.14 Ultimately a lack of time restricted the potential for the council and EAW to seek agreement over the SFCA report. However the concerns over viability remained and, in conjunction with the fact that the site was not essential to the delivery of the LDP Housing and Affordable Housing requirements, the council resolved that the site should be deleted from the plan.

3 Rationale for Retaining the Deposit Settlement Boundary

- 3.1 In addressing this issue it should be noted that the procedures used for defining settlement boundaries is separate and divorced from that used for identifying allocations in the LDP. In instances where an allocated site adjoins a settlement boundary, within the settlement side, it does not necessarily follow that the settlement boundary has been defined specifically to include the allocated site. It is perfectly reasonable for a settlement boundary to include a site, which is subsequently allocated for specific uses, because it is appropriate for the site to be within the settlement limit. This is the case with the Navigation Colliery site.
- 3.2 The Navigation Colliery site is a derelict brownfield site lying adjacent to the northern end of the Crumlin settlement. National policy guidance advocates that brownfield sites should be used in preference to Greenfield sites for development purposes and as such should be facilitated for redevelopment unless there are

compelling reasons why the site should not be developed. This approach has been endorsed in the LDP Strategy, where one of the eight key components seeks to exploit brownfield opportunities where appropriate. Therefore significant brownfield sites adjacent to existing settlements should, therefore, be included within settlement boundaries.

- 3.3 The Navigation Colliery site is suitable for development for a range of uses. This is evidenced by the fact that the site has been allocated for employment or residential use in successive development plans. Even without an allocation the site is suitable for development and should be located within the settlement boundary to facilitate its redevelopment.
- 3.4 Paragraph 4.2.4 of Background Paper 14 – Candidate Site Assessment Methodology sets out the criteria used in determining settlement boundaries in the LDP. Whilst a number of the criteria apply to the site, the primary criterion is:

Brownfield sites should be included where they are in reasonable proximity to existing settlements. Their development should be environmentally sustainable, taking into account the possibility of mitigation (4, 5, 8);

Given that the site is suitable for redevelopment for various uses and that the site is brownfield and located adjacent to the existing settlement, this criterion requires that Navigation Colliery be included within the identified settlement boundary on its own merits, and not because it is allocated for any particular purpose. Conversely the fact that the site has lost its allocation is no justification for excluding the site from the settlement boundary.

4 The Strategy Implications of the Unallocated Site Within The Settlement Boundary

- 4.1 In housing terms the LDP should seek to ensure that sufficient land has been allocated to meet its housing requirement for the plan period. The Deposit LDP incorporated an overallocation of housing land that amounted to over 20% of the LDP requirement. It is standard practice to include an overallocation element to cover for sites that, due to circumstances not known at the time of drafting the plan, may not be developed during the plan period, as well as providing a range and choice of sites. The loss of this site is not significant in terms of overall housing provision and therefore does not adversely affect the strategy in this respect.
- 4.2 The position is similar in respect of the provision of affordable housing, which is outlined above and explained in greater detail in the “Maximising Affordable Housing” supplementary paper.
- 4.3 However, it could be questioned what effect the site may have on the strategy if it were to be developed as a windfall site. The LDP estimates that the site could accommodate approximately 145 units based on an average density. However, given the issues raised above by EAW, it is highly unlikely that the site would realise anything near that number of units. However even if the site did realise those numbers, the Deposit LDP includes a windfall assumption in the total housing requirement of 800 dwellings. Obviously the development of the site would realise a large number of this assumption. However it must be noted that this is an assumed figure and does not represent an absolute limit for development. This is evidenced by the fact that “Background Paper 6 – Supplementary Paper 3 -

Housing Land Supply” reviewed the housing requirements for the LDP based upon the first 3 years of the LDP period. Based on this reassessment the windfall assumption was raised to 1200 units. The development of the site would not compromise the housing requirement or the LDP strategy as a windfall site.

- 4.4 It should be noted that the LDP does not seek to restrict or stifle acceptable development where this has not been previously identified and, in terms of affordable housing, an over provision would normally be considered to be a good thing. The monitoring framework for the LDP will monitor the performance of the plan and includes trigger points that will instigate consideration of a review of the LDP either in part, or completely, when they are reached. Given the above the development of the site as a windfall site would not make the LDP unsound.
- 4.5 The development of the Navigation Colliery site accords with Criterion A of policy SP2, and is in accord with the supporting paragraph 1.59, which seeks to utilise brownfield sites over Greenfield sites. Further to this the use of this brownfield site would meet the strategy aim of exploiting brownfield opportunities, outlined in respect of the Northern Connections Corridor in paragraphs 1.31 to 1.33. Consequently the site’s development would be in accord with the LDP Strategy and would not make the LDP unsound.
- 4.6 One issue identified by the Inspector at the Exploratory Meeting was whether the inclusion of this unallocated site within the settlement boundary would lead to a lack of certainty. The site has been allocated for employment use in the UDP and for Residential use in the LDP. Therefore the council’s position on the site’s suitability for development has been clear for a considerable period of time. In respect of the constraints that are present on the site, the preparation of the LDP has enhanced existing knowledge, particularly in respect of flooding issues, and therefore limits to development are also known in greater detail than has been the case previously. It could be argued that the non-allocation of the site throws uncertainty over what uses would be suitable for the site. In reality the fact that the site is not allocated does not imply that it is not suitable for development, rather that it is not required to meet any of the LDP requirements (housing, employment etc.). The site is also suitable for a variety of land uses as evidenced by the fact that the site was allocated for employment use in the UDP and for residential use in the LDP. The deletion of the site from the LDP means that the site is not restricted to a single use and, with the site being located within the defined settlement boundary and there being an in-principle presumption in favour of development on the site, subject to the proposal being acceptable in terms of general planning criteria, the deletion of the site from the LDP does not result in uncertainty over the site, rather it offers more flexibility in the approach to its redevelopment.

5 Changes In Circumstances Supporting the Removal of the Allocation From The Site

- 5.1 The site requires reclamation prior to being brought back to beneficial use, and the council’s position has historically been that facilitating development was required in order to realise the appropriate development of the site. This is evidence by the employment allocation in the UDP and the residential allocation in the LDP. Prior to the downturn in the economy, a major housebuilder, Edward Ware Homes, was actively involved in bringing forward plans for the reclamation and redevelopment of the site for residential use. However the economic downturn forced Edward Ware

Homes to cease trading and the scheme is now not likely to be realised due to financial uncertainty.

- 5.2 The council's main aim has always been the restoration of the site's listed buildings back to beneficial use. It was the council's view, for a considerable period of time, that this aim could only be achieved with the assistance of facilitating development on the remainder of the site, hence the Employment and Residential allocations in the UDP and LDP respectively.
- 5.3 Over the UDP and LDP Plan periods the state of repair of the listed building deteriorated and the need to realise the renovation of the listed buildings became increasingly important and urgent. The council has been working with the landowner and have recently commenced working with a Building Preservation Trust (Cadw Sir Gaerfyrddin Cyf) on bringing forward a scheme that would realise the renovation of the listed buildings through the establishment of an innovations-based employment centre. Feasibility and Options Appraisal studies have been undertaken and the scheme has gained momentum. A primary user for the scheme has been identified and the council and the Trust are currently in negotiations with them.
- 5.4 The revised scheme requires the restoration of the listed buildings set within a larger landscaped area. Consequently the scheme will not require the level of facilitating development as originally envisaged by the Council, although a limited amount of development may be required. As a result the allocation of the site for development within the LDP would be inappropriate due to the change in circumstances.

6 EAW / CCBC Meeting – 18 January 2010

- 6.1 At the Exploratory Meeting into the LDP held on 8 December 2009 the Inspector suggested that EAW and CCBC meet to try to resolve their differences on the flood issues relating to the site. This meeting took place on 18 January 2010 and has resulted in the preparation of a statement of agreement that outlines agreements by both CCBC and EAW on the issues, removing EAW objections to the allocation of the site for residential use. In summary detailed work that EAW was undertaking for Risca, which included this site, realised similar flood extents to those realised by Entec's strategic modelling for the site, although flood levels were different, the similarity in extent reflecting the topography of the site. Given that the area limited by flooding was essentially the same, the area of land not constrained by flooding was agreed. In addition it was agreed that detailed layout and design could have an effect on downstream flood risk, especially in terms of mitigation and attenuation and that this should be considered at detailed planning stage.

- 6.2 The Statement of Agreement is included as Appendix 1 to this document.

7 Conclusion

- 7.1 The allocation of the Navigation Colliery site in the LDP reflected the situation that saw the site being promoted for reclamation and housing development by a volume house builder. However, since the publication of the Deposit LDP there have been significant changes in circumstances that require the reconsideration of the allocation. The material changes that need to be considered are:
 - ❖ EAW raised in-principle objections to the site on flooding grounds. In addition to this EAW was requiring additional detailed modelling work to

resolve the outstanding issues. The council's opinion was that the principle of the land use being acceptable had been established and that work being sought by EAW was inappropriately detailed for consideration through the LDP and was more appropriately considered through a planning application. This issue has subsequently been resolved.

- ❖ The site is not essential to meeting either the overall housing target, or the affordable housing target for the LDP. As such it is not essential that this site be allocated for housing in the LDP, and its omission does not comprise the Strategy or the soundness of the LDP.
- ❖ The site is appropriately located within the settlement boundary, whether it is allocated or not. The potential for developing the site is not, therefore, lost if the site is not allocated, and it also allows for the appropriate level and nature of development to be brought forward to realise the council's aspirations for the site.
- ❖ There are significant constraints to realising the development on the site (financial, reclamation, deteriorating condition of Listed Buildings etc.) and the non-allocation of the site unfetters the scope of the development that could be brought forward on the site to realise the development aims.
- ❖ The development options of the site have been narrowed following the demise of Edward Ware Homes and, currently, an innovations-based employment site is being progressed. This option will greatly reduce the level of any facilitating development, requiring significant reduction in housing numbers if retained in the LDP.

7.2 Whilst the objections from EAW have been overcome, the remaining issues of viability and the changing circumstances on the site mean there is significant concern over the realism and deliverability of the housing allocation. This raises concern in respect of the soundness of the allocation and the effect that it might have on the soundness of the LDP. Therefore the council position remains that of recommending to the Inspector that the site be deleted from the LDP.

Joint Statement of Common Ground Between Caerphilly County Borough Council and Environment Agency Wales

HG1.25 - Navigation Colliery

- S1 This statement is issued jointly by Environment Agency Wales (EA) and Caerphilly County Borough Council (CCBC) and outlines an agreement in respect of the flood risk issues that relate to LDP allocation HG1.25 – Navigation Colliery. The statement sets out the agreed position of both parties in respect of the issues of contention.
- S2 At the Exploratory Meeting held on 8 December 2009 the Inspector requested that CCBC and EA meet to try to resolve their differences in respect of the Navigation Colliery site. This meeting was held on 18 January 2010, and resulted in general agreement on the flood risk issues raised in objections by EA to the Deposit Plan allocation. This agreement builds on previous advice from EA (in particular, letter dated 10 August 2009 – included as Appendix 1) and Entec to progress a way forward for this site allocation, whilst acknowledging that a detailed site specific assessment of flooding consequences informed by hydraulic modelling, will need to inform detailed design and layout when the site is brought forward.
- S3 The issues that were discussed at the meeting related to outstanding matters emanating from the Strategic Flood Consequences Assessment for Navigation Colliery undertaken by Entec on behalf of CCBC, and the objection raised by EA. There were three principle issues that were discussed at the meeting, and these issues were:
- ❖ Discrepancies between the CCBC commissioned Entec model (CCBC Model) and the Risca Hazard Mapping Study, undertaken by JBA on behalf of EA (EA Model);
 - ❖ Downstream flooding implications of removing the existing culvert within the site ('the downstream culvert');
 - ❖ Whether sufficient land remains to cater for development need.

Discrepancies between the CCBC and EA Flood Models

Original Position

- S4 Entec produced the Strategic Flood Consequence Assessment (SFCA) for Navigation Colliery. The findings of the report were:-
- I. The site did not flood during a 1% flood event.
 - II. The site did flood when a 50% blockage of the existing culvert, which runs within the site boundary, was assessed.
 - III. A significant part of the site flooded during a 0.1% extreme flood event.
 - IV. The site was appropriate for residential development, although constrained by the 0.1% extreme flood outline and required careful design, including for access/egress.
 - V. If residential development was pursued it was recommended that the culvert be removed

- VI. If the culvert was removed it was acknowledged that there would be some impact on flood risk downstream that would need to be managed to ensure there is no increase in flooding elsewhere up to and including the 0.1% extreme flood event.
- S5 In April 2009 EAW submitted comments on the report that raised issues in respect of the accuracy of the modelling output, having compared the CCBC Model with the developing EAW Model, namely:-
- I. Concern over the dimensions of the culvert that were used;
 - II. Concern over the roughness value for the culvert that was used;
 - III. The 1 dimensional and 2 dimensional models were not dynamically linked;
 - IV. Comparison of the output of both models indicated a 1.5 metre difference in flood water levels during the 1% flood event.

Outcome of the Meeting

- S6 EAW presented output from their model that had been completed in August 2009. The flood outline for the 0.1% extreme flood from the EAW Model appeared similar to the outline shown by the CCBC Model (EAW and Entec Models flood outlines are included as Appendices 2 and 3 respectively). The site is long and narrow and is constrained by steeply rising land along the western part, which incorporates a rise of 12.5 metres at the western extent of the 0.1% extreme flood outline. Given this change in levels, Entec anticipated that flood levels would have to rise by approximately 15 metres before significant expansion of the flood extent occurred.
- S7 It was discussed that, whilst there were differences between the two models, the lateral extent of flooding would likely reflect the topography of the land. CCBC agreed that the extent of developable land was constrained by the 0.1% extreme flood outline and that the level of development would need to reflect this.
- S8 The likely implications for downstream flood risk were also discussed at the meeting.

Downstream Flood Implications Of Removing The Downstream Culvert *Original Position*

- S9 The Entec report recommended that, should the site be brought forward for residential use, the existing culvert through the site should be removed and that this would not likely significantly increase flood risk downstream.
- S10 EAW advised that the Entec report did not provide sufficient detail on the implications for downstream flooding to conclude that the impact of removing the culvert could be managed and mitigated without increasing flood risk downstream in accordance with TAN15.
- S11 In response to EAW advice, CCBC and Entec confirmed their view that, whilst further work was required to address the issue, the work was more appropriately undertaken by the prospective developer who would need to confirm the downstream flooding impact with appropriate detailed modelling, and provide mitigation for this on site. This would be assessed as part of a detailed site specific assessment of flood consequences to determine whether the risks and consequences of flooding can be acceptably managed in line with TAN15.

Outcome of the Meeting

- S12 CCBC conceded that the impact of removal of the culvert had not been assessed in the SFCA. However, it was maintained that further detailed modelling of the downstream impact and the mitigation measures consequently needed would be more appropriate for the detailed design stage. EAW suggested that due to the steepness of the site, overland flood flow routes originating from the upstream limit of the culvert may finally discharge back into the channel at the downstream limit over a very short period of time, resulting in a limited amount of upstream attenuation at the inlet to this culvert. However, this would need to be investigated further to confirm that this is the case.
- S13 It was also suggested that a further culvert upstream to the north of the site may be acting as a control, causing water to back up further upstream, which would reduce the potential impacts of removing the downstream culvert. If this was the case, EAW accepted that the likely implications for downstream flooding, if the culvert was removed, are not likely to be very significant compared to the scenario where the culvert is retained, but would need to be thoroughly assessed to ensure no impact elsewhere.
- S14 It was agreed that if the site allocation was constrained to prevent development in the 0.1% extreme flood outline, the downstream impacts and necessary mitigation could be properly assessed at a detailed planning stage. It was agreed that the most conservative 0.1% extreme flood outline is used to inform this to compensate for the differences between both models.
- S15 Following the meeting, Entec did some work to compare both models. Even though they considered that it was possible that the 1% flood event plus 50% blockage scenario to be more severe than the 0.1% extreme flood event outputs from the CCBC Model, they considered that the flood levels used in the EAW Model to be sufficiently conservative to compensate for this difference. It was concluded that the EAW modelled 0.1% extreme flood outline should be therefore be used.

Does Sufficient Land Remain To Meet Development Requirement

- S16 EAW raised concerns whether the site could accommodate the level of development that would be required to facilitate the reclamation of the site and the rehabilitation of the Listed Buildings, given the limited amount of land available for development due to flood risk constraints. EAW were particularly concerned that increased development pressure to develop in the areas indicated as being at risk from flooding would result from reclamation/regeneration aspiration for the site.
- S17 CCBC confirmed that, irrespective of the council's current position (i.e. not looking at residential development on the site) the site allocation should reflect development located on land outside the 0.1% extreme flood event outline. If in future development is proposed within the area constrained by flooding, the developer would need to satisfy CBCC and EAW that the development fully complies with TAN15.
- S18 During the meeting it was agreed that the access road to the site lay within the identified 0.1% extreme flood outline and that access would require careful design to ensure it complied with TAN15, which could further constrain the development of the land. Due to the likely depths and velocity of flooding in this area, it is likely that

mitigation will be needed as a result and that this would need to be achieved on site. It was agreed that this assessment would need to be undertaken by the proposed developer of the site.

S19 It was agreed that, if the Inspector at the LDP Examination was mindful to maintain the residential allocation on the site, that a development brief would be required to be produced that included the following:

- A. A plan showing the flood risk constraints at the site, to show the 0.1% extreme flood event outline from the EAW Model, and an explanation of how this may affect the development density.
- B. The need for more detailed hydraulic modelling to be carried out to establish flood depths and velocities at the site to inform an assessment of flood consequences (scope of model and assessment to be agreed with EAW). Any assessment would need to establish that the risk and consequences of flooding associated with a development proposal can be acceptably managed in line with TAN15.
- C. The need for a comprehensive approach to developing the site in order to facilitate any mitigation that becomes feasible following detailed assessment. Piecemeal development of this site should be avoided, as a fragmented approach to development could mean that parts of the site are developed whilst in other parts the risks and consequences of flooding cannot be managed.
- D. The need for any mitigation measures would need to be rigorously assessed to ensure that there is no impact on flood risk elsewhere, particularly downstream, for all flood events including the 0.1% extreme flood event. This would include any culvert removal. Any impact must be mitigated on site.
- E. An advisory note that if the culvert were to remain then development at the site should be limited to areas outside the 0.1% extreme flood event outline as defined by the EAW Model.
- F. The need for access and egress to and from the site to be considered and comprehensively assessed to ensure that it is designed to meet the criteria set at A1.15 of TAN15. As well as discussion with EAW, the developer should engage with other professional advisors involved with emergency planning and rescue.

The Agreements

- 1) It was agreed that the 0.1% extreme flood outline from the EAW Model is used to inform at a strategic level the amount of developable area on site. This outline is included as Appendix 2.
- 2) It was agreed that the detailed assessment of impact on flood risk elsewhere, particularly downstream, would be more appropriately addressed by the proposed developer at the detailed planning stage.
- 3) It was agreed that the site was significantly constrained by flooding and this would restrict the area of development, except where a developer was able to provide appropriate evidence by way of an assessment that would confirm that development

proposals in this areas can be acceptably managed in line with TAN15 to the satisfaction of CCBC and EAW.

- 4) It was agreed that, if the site was allocated in the LDP, a development brief would be drawn up that identified the constraints and requirements for the site.
- 5) It was agreed that the access to the site was currently located within the identified 0.1% extreme flood outline, and so will require careful design to ensure it is compliant with TAN15.
- 6) It was agreed that agreement points 1 to 5 address EAW's principle concerns over the Strategic Flood Consequences Assessment and conditionally removes the EAW objection to the principle of the use of the site for residential development.

The Agreed Positions

- 1) The Council maintains its recommendation to the Inspector that the HG1.25 – Navigation Colliery site be deleted from the LDP.
- 2) The Council maintains its position that the Navigation Colliery site remains within the identified settlement boundary.

Appendix 1

EAW Letter Dated 10 August 2009

Anne Kemlo
Entec UK Ltd
17 Angel Gate
City Road
London
EC1V 2SH

Ein cyf/Our ref: SE/2007/104324/BD-01/PD1-L09

Eich cyf/Your ref:

Dyddiad/Date: 10 August 2009

Sent by email – kemla@entec.co.uk

Annwyl Syr/Madam / Dear Sir/Madam

STRATEGIC FLOOD CONSEQUENCES ASSESSMENT - NAVIGATION COLLIERY, CRUMLIN

Thank you for email dated 20 May 2009. Attached with this email was a copy of your letter to Victoria Morgan at Caerphilly Borough Council dated 14 May 2009 (reference 23549/AK/140509).

We note that your letter to Victoria Morgan was sent as a response to our letter to the LPA dated 28 April 2009 (reference SE/2007/104324/BD-01/PD1-L06). Although there was no request for us to respond to your letter dated 14 May 2009, we felt that our comments would be helpful to the LPA when considering a way forward for this site in the context of the LDP. Our comments are not intended to address in detail the points raised in your letter.

We agree that without removal of the culvert, development should be avoided in areas shown to flood during the 1% plus climate change plus 50% blockage scenario fluvial flood event. Our advice is that there should be no built development, including built development intended for recreation and amenity, in the areas identified as the 1% plus climate change plus 50% blockage scenario fluvial flood event

During the 0.1% flood event, it is clear that a significant part of the site is flooded to considerable depths. Therefore land raising is likely to be needed to ensure that any development in these parts of the site can be within the tolerable flooding conditions (as set out at paragraph A1.15 of TAN15). However it is critical that the loss of flood storage as a result of any land raising is mitigated to ensure that there is no impact on third parties.

There are some parts of the site appear unaffected by fluvial flooding, therefore feasible for development. Development should be directed into these areas in the first instance before considering locating any development in the 0.1% flood event outline. As states earlier, no built development should be located in the 1% plus climate change plus 50% blockage scenario flood outline.

Given the uncertainties of achieving mitigation without affecting third parties, as a way forward, we recommend that a precautionary approach is adopted whereby development is avoided (at the

Strategic/LDP stage) in the 0.1% flood outline. With more detailed study at a planning application stage, it may be that more development is possible. But given that the LDP is focussed on deliverability, at this stage, the only certainty is that development is possible outside the 0.1% flood outline. Development density should reflect this constraint, and limit development, but with recognition that more development could be possible (which would allow for flexibility in the Plan).

The issue with avoiding development in the 0.1% flood outline is which outline to use. Our JBA Study is the best available data, however flood outlines will not be available until the end of August 2009. We recommend that you use the outlines from our JBA Study as a basis to inform where development is possible at the strategic stage, or that Entec would need to undertake further work. This work would need to address the discrepancy between the JBA and Entec data. As we have identified, there is a 1.5 metre difference in levels which needs to be clarified in line with the advice from JBA in the technical review (dated May 2009 – enclosed with this letter). Alternatively, on a precautionary basis, Entec could add 1.5 metres, which would expand their flood outlines. This could then be used to inform the 0.1% flood outline.

I trust our advice is clear. Should you or the LPA wish to discuss this matter further, please do not hesitate to contact me.

Yn gywir / Yours faithfully

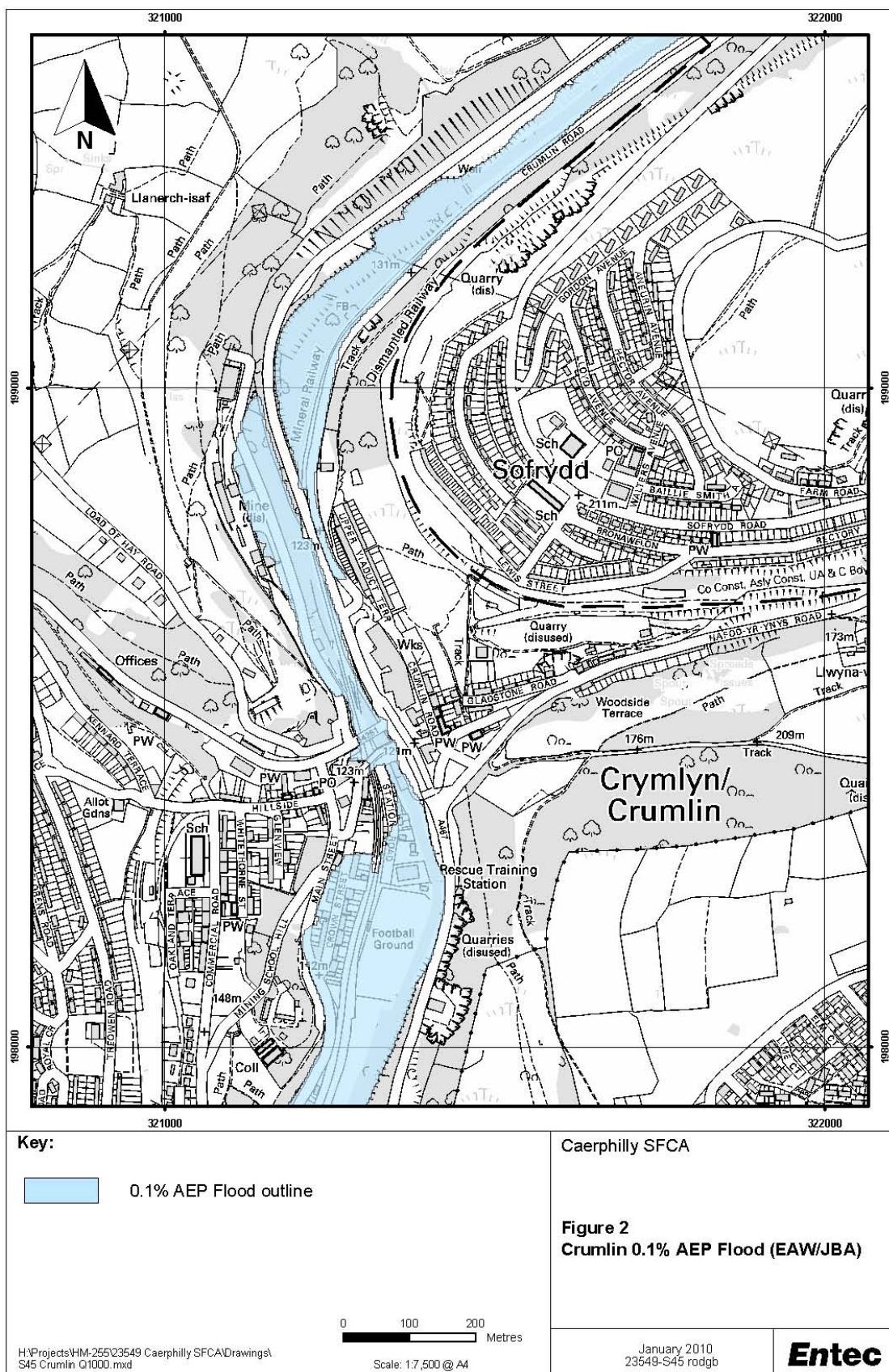
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Cc Victoria Morgan, Caerphilly County Borough Council

APPENDIX 2

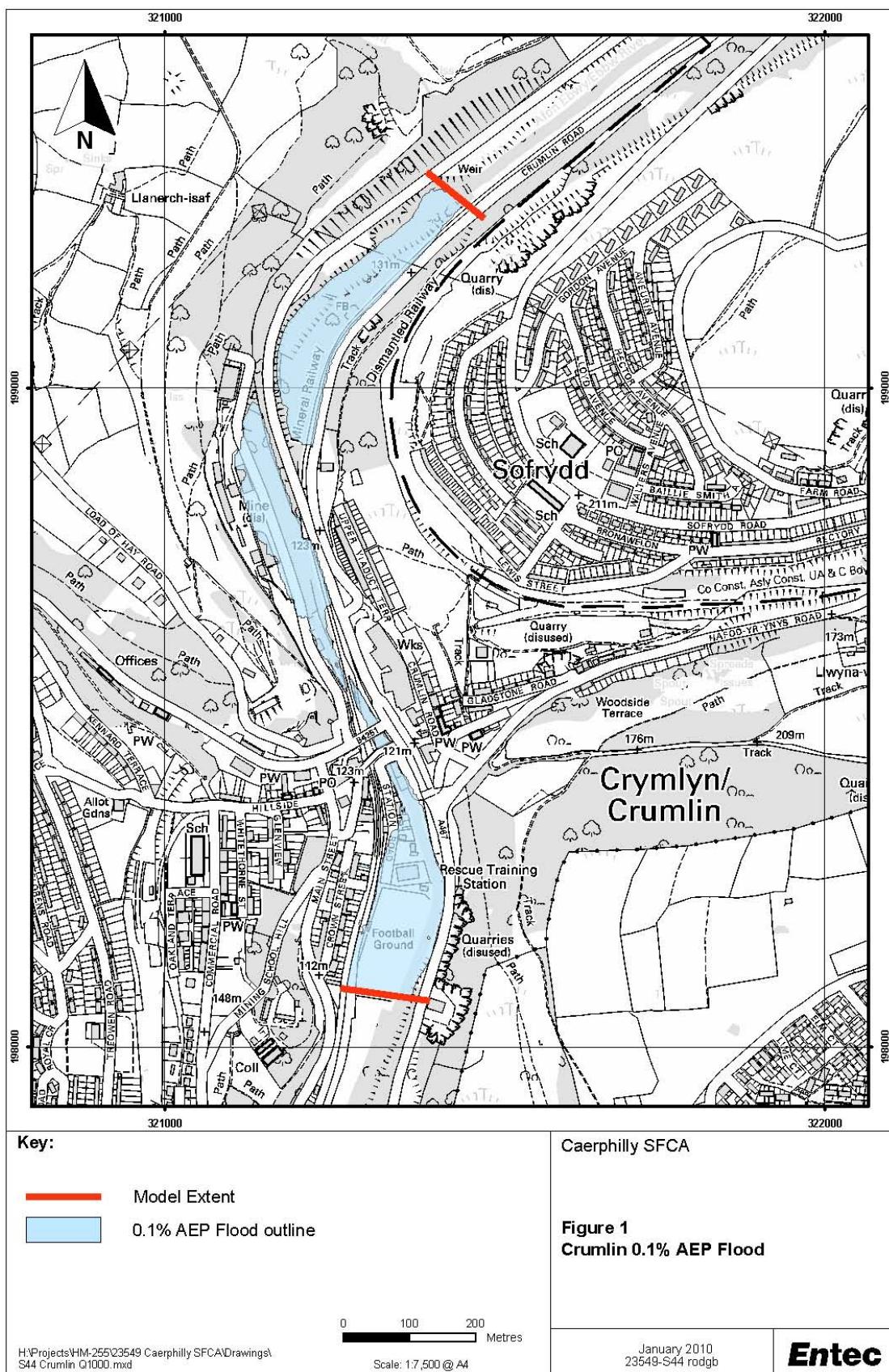
EAW Model 0.1% Flood Outline



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APPENDIX 3

CCBC Model 0.1% Flood Outline



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