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08/07/2022

Annwyl Syr/Madam / Dear Sir/Madam,

BWRIAD / PROPOSAL: Hybrid planning application for residential development for up to 250 dwellings (submitted in OUTLINE), associated highway and bridge improvement / realignment works (submitted in FULL). Development involves the demolition of all buildings on site and of the existing B4267 Leckwith Road Bridge

LLEOLIAD / LOCATION: LECKWITH QUAYS

Further to our email dated 26 May 2022 and the completion of the hydraulic model review, we have now considered the Flood Consequences Assessment (FCA) by WSP, reference 7005-3561-C-RP-0003-05-FCA, dated April 2022 and are now able to advise your Authority on the acceptability of flood risks and consequences in line with TAN15, as provided below. The FCA was sent to us along with the hydraulic modelling review information, therefore, we are unsure whether your Authority has received a copy.

We have concerns with the application as submitted. We recommend that you should only grant planning permission having considered the following advice on flood risk elsewhere.

We also advise that based on the information submitted to date, conditions regarding flood risk, European protected species, pollution prevention and land contamination should be attached to any planning permission granted. Without the inclusion of these conditions, we would object to this planning application. Further details are provided below.

Flood Risk

The planning application proposes highly vulnerable development (up to 250 residential dwellings (OUTLINE) and associated highway and bridge improvement / realignment works (FULL)). Our Flood Risk Map confirms the site to be within Zone C1 of the Development Advice Map (DAM) contained in TAN15 and the Flood Map for Planning identifies the application site to be at risk of flooding and falls into Flood Zones 2 and 3 Rivers and Sea.

Section 6 of TAN15 requires the Local Planning Authority to determine whether the development at this location is justified. Therefore, we refer you to the tests set out in section 6.2 of TAN15. If you consider the proposal meets the tests set out in criteria (i) to (iii), then the final test (iv) is for the applicant to demonstrate through the submission of an FCA that the potential consequences of flooding can be managed to an acceptable level.

As advised in our email of 26 May 2022, we have completed a review of the updated hydraulic flood model. Although there are some minor errors in the model, it is now considered suitable to support and inform the FCA.

It is noted that the proposed bridge drawing supplied in the Hydraulic Model Report and FCA has some errors, and it has been assumed that the values used to represent the proposed design applied within the model are correct over those shown in the drawing in the FCA. We note the proposed cycle ramp has now been included within the model, the elevation and material layer used to represent the development and the bridge soffit have also been updated in the model.

You should note that the advice on increased flood risk elsewhere is heavily dependent on the proposed culverts being constructed and operating as indicated in the final model and FCA. Any changes to the design of the culvert, bridge, cycle path or elevations of the site, may impact flood risk to the site or have impacts elsewhere. If any changes to the design are undertaken, the consequences of flooding **must** be reassessed.

A key mitigation measure is setting the soffit level of the proposed bridge at 8.73mAOD which is represented in the modelling, however there is no reference to this in the FCA dated April 2022 by WSP. The drawing 70053561-002 within the FCA does not include this soffit level. Therefore, we advise you may wish to request an updated drawing showing the soffit level of 8.73mAOD from the applicant, to ensure the design (and mitigation measure) is precise and enforceable. As a minimum, we seek a planning condition attached to any permission granted securing the soffit level of the bridge.

Condition: soffit level to be set at 8.73mAOD

Justification: to manage and reduce the risk of flooding to the proposal and elsewhere.

Flood Risk Elsewhere A1.12 Criteria

The FCA states that the culverts prevent any further flood risk to third parties by containing flood waters within the channel. There is a predicted increase within a wooded area immediately downstream of the site. This area is not currently at risk of flooding, but post-development is predicted to flood to depths of 20mm in the extreme 0.1% annual probability event. This is described in section 4 of the FCA (Hydraulic model - key results) which states 'this increase is principally constrained to the river channel, except immediately downstream of the site within the wooded area where an increase of 2 cm is observed on the southern bank'. It should be noted this is not shown to affect any buildings or properties.

There are also reductions in flood risk in the wider areas which are also described in section 4 of the FCA which you may want to consider in the overall planning balance.

While the detriment may be perceived to be a small amount and affecting a limited area, you should note paragraph A1.12 of TAN 15 which states “A site should only be considered for development if the following conditions can be satisfied; - No flooding elsewhere.”

The modelling also identifies further increases in water levels in the wider area during the 1% plus climate change allowance (CCA) event when this coincides with 80% blockage to the central arch of the historic bridge and a 30% blockage to the upper section of both bypass culverts. Some effects are noted on the River Taff by Cardiff Bridge, due to higher levels within Cardiff Bay as well as additional overflow around Stuart Street adjacent to Cardiff Bay. However we have no concerns over these changes which are likely to be modelling instabilities rather than representing actual flooding mechanisms during this flooding event.

Further advice on TAN15 acceptability criteria

We note that the development covered by this application is split into two parcels on either side of the proposed new bridge crossing referred to as the northern (1.3 ha) and the southern plateaus (6.4 ha). It is proposed to raise the development parcels above the flood level to reduce the risk of onsite flooding, while flood relief culverts bypassing the historic bridge are also proposed.

Fluvial Assessment - A1.14 Criteria

During the 1% CCA flood event the development is predicted to remain flood free and therefore A1.14 compliant for the post development scenario. This is based on a 1% CCA flood event or design flood level of 8.38m AOD for the upstream end of the site and 7.90m AOD at the downstream end. The FCA therefore recommends that finished floor levels will be set at 8.96m AOD at the upstream end and 8.50m AOD at the downstream end. All ancillary areas are predicted to be flood free during this event.

However, your Authority should note that should a 1% CCA event coincide with the modelled blockage scenario of 80% blockage to the central arch of the historic bridge and a 30% blockage to the upper section of both bypass culverts, shallow flooding is predicted post-development to the northern plateau of circa 50mm in ‘external and ancillary areas only’ which we understand to be landscaping areas. The hazard classification rating is assessed to be low with the remainder of the proposed development site predicted to be flood free. On this basis, subject to your authority being satisfied with those consequences, we raise no further concerns.

If planning permission is granted, the FCA dated April 2022 by WSP should be included in the approved plans and documents condition on any decision notice.

Fluvial Assessment - A1.15 Criteria

During the 0.1% fluvial flood event the residential buildings are predicted to remain flood free and therefore A1.15 compliant for the post development scenario. The FCA states the site is flood free during this event, (section 6 mitigation summary), however no flood levels have been provided.

Your Authority should note that should a 0.1% event coincide with the modelled blockage scenario of 80% blockage to the central arch of the historic bridge and a 30% blockage to the upper section of both bypass culverts, shallow flooding is predicted to the northern plateau of less than 200 mm in external and ancillary areas only. However, this is within the indicative tolerable conditions set out in A1.15 of TAN15 i.e. <600mm. The hazard classification rating is assessed to be low with the remainder of the proposed development site predicted to be flood free.

Tidal Assessment

We consider the risk of tidal flooding in the 0.5% and 0.1% CCA tidal flood events to the proposed development is minimal as the site is afforded protection by Cardiff Bay Barrage.

Emergency Access/egress

Section 5.4 of the FCA states that the B4267 which accesses both plateaus of the site is predicted to flood to impassable depths on the opposite (eastern) side of the bridge, however the route westward remains flood free. This provides a connection to the wider strategic highway network via the B4267 and A4055.

We recommend you consider consulting other professional advisors on matters such as emergency plans, procedures and measures to address structural damage that may result from flooding. Please note, we do not normally comment on or grant the adequacy of flood emergency response plans and procedures accompanying development proposals, as we do not carry out these roles during a flood. Our involvement during a flood emergency would be limited to delivering flood warnings to occupants/users.

Further Advice

The conditions, and advice in relation to **Cwm Cydfin Site of Special Scientific Interest (SSSI)**, set out in our letters of 4 November 2021, reference CAS-168336-Y0R3 and 8 December 2020, reference CAS-129806-T4T9 remain **unchanged save for the European Protected species conditions which are separated out into the full and outline aspects of this hybrid application**. For ease of reference, all the conditions and informatives requested are included below:

European Protected Species

Condition: Bat Conservation Plan (full application)

No development, including site clearance shall commence until a Bat Conservation Plan has been submitted to and agreed in writing by the Local Planning Authority and shall include:

- Details of impacts (direct and indirect) from the highway and bridge works upon any bat roosts identified within structures, buildings and trees on site.
- Details of measures to avoid potential harm to bats, including details of pre-commencement surveys or checks where required.
- Details of measures to mitigate the impacts upon bats, including details of the design and location of replacement roosts appropriate to the species and nature of the roosts identified.
- Details of timing, phasing and duration of construction activities and conservation measures.

The Bat Conservation Plan shall be carried out in accordance with the approved details.

Justification: To ensure that an approved species Conservation Plan is implemented, which protects species affected by the development.

Condition: Bat Conservation Plan (*Outline application*)

No development, including site clearance shall commence until a Bat Conservation Plan has been submitted to and agreed in writing by the Local Planning Authority and shall include:

- Details of impacts (direct and indirect) from reserved matters works upon any bat roosts identified within structures, buildings and trees on site.
- Details of measures to avoid potential harm to bats, including details of pre-commencement surveys or checks where required.
- Details of measures to mitigate the impacts upon bats, including details of the design and location of replacement roosts appropriate to the species and nature of the roosts identified.
- Details of timing, phasing and duration of construction activities and conservation measures.

The Bat Conservation Plan shall be carried out in accordance with the approved details.

Justification: To ensure that an approved species Conservation Plan is implemented, which protects species affected by the development.

Condition: Otter Conservation Plan (*full application*)

An Otter Conservation Plan for the full planning application for the highways and bridge works should be provided which shall include:

- Details of suitable features to be included in the design of the new road bridge to ensure otter will be able to pass under the road safely, particularly at times of high water level.
- Details of protective measures to prevent incidental killing, injuring or capture of otters during construction.
- An assessment of the impacts of the proposals upon otter. This should consider direct and indirect impacts and address the construction and operational phases. Clarification of the extent, distribution and structure of existing habitat; habitat lost, habitat to be retained, enhanced, and any habitat to be created; and an assessment

of their condition and value for otter. A plan should identify these areas at an appropriate scale.

The Otter Conservation Plan shall be carried out in accordance with the approved details.

Justification: To ensure that an approved species Conservation Plan is implemented, which protects species affected by the development.

Condition: Otter Conservation Plan (*Outline application*)

An Otter Conservation Plan should be provided which shall include:

- A plan of the vegetated buffer to be retained alongside the river showing the width of the buffer, extent and location of habitat to be retained and created.
- Measures to protect the buffer from human disturbance.
- Details of protective measures to prevent incidental killing, injuring or capture of otters during construction.
- An assessment of the impacts of the proposals upon otter. This should consider direct and indirect impacts and address the construction and operational phases. Clarification of the extent, distribution and structure of existing habitat; habitat lost, habitat to be retained, enhanced, and any habitat to be created; and an assessment of their condition and value for otter. A plan should identify these areas at an appropriate scale.
- Details of initial aftercare (if new habitat is to be created) and ongoing management proposals for the long-term maintenance of retained/created vegetation along the river bank as suitable for otter.

The Otter Conservation Plan shall be carried out in accordance with the approved details.

Justification: To ensure that an approved species Conservation Plan is implemented, which protects species affected by the development.

Condition: Lighting Scheme (*full and outline applications*)

A Lighting Scheme is to be submitted. The scheme is to include:

- Details of the siting and type of external lighting to be used.
- Drawings setting out light spillage in key sensitive areas that demonstrate that the River Ely and associated buffer and the woodland surrounding the site shall be unlit by external lighting and be maintained as dark corridors.
- Details of lighting to be used both during construction and operation.

The lighting shall be installed and retained as approved during construction and operation.

Justification: A lighting plan should be submitted, to ensure lighting details are agreed prior to installation and to reduce the impacts of lighting in the interest of protected species, including bats and otters, the habitats and the commuting corridors along the Western boundary of the site and the River Ely.

We request that the following informative is attached to any planning permission granted by your Authority:

Warning: A European protected species (EPS) Licence is required for this development.

This planning permission does not provide consent to undertake works that require an EPS licence.

It is an offence to deliberately capture, kill or disturb EPS or to damage or destroy their breeding sites or resting places. If found guilty of any offences, you could be sent to prison for up to 6 months and/or receive an unlimited fine.

To undertake the works within the law, you can obtain further information on the need for a licence from Natural Resources Wales on 0300 065 3000 or at

<https://naturalresources.wales/permits-and-permissions/species-licensing/when-you-need-to-apply-for-a-protected-species-licence/?lang=en>.

Development should not be commenced until the Applicant has been granted a licence by Natural Resources Wales pursuant to Regulation 55 of the Conservation of Habitats and Species Regulations (2017) authorizing the specified activity/development to go ahead.

We may wish to discuss aspects of the proposed bat mitigation with the applicant in more detail at the EPS licence application stage. Please note that any changes to plans between planning consent and the EPS licence application may affect the outcome of the licence application.

Pollution Prevention

Condition 5: Construction Environmental Management Plan

No development, including site clearance, shall commence until a Construction Environmental Management Plan (CEMP) for the new bridge has been submitted to and approved in writing by the Local Planning Authority. The CEMP should include:

- Construction methods: details of materials, how waste generated will be managed;
- General Site Management: details of the construction programme including timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain.
- Soil Management: details of topsoil strip, storage and amelioration for re-use.
- CEMP Masterplan: details of the extent; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures.
- Control of Nuisances: details of restrictions to be applied during construction including timing, duration and frequency of works; details of measures to minimise noise and vibration from piling activities, for example acoustic barriers; details of

dust control measures; measures to control light spill and the conservation of dark skies.

- Resource Management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater and energy use
- Traffic Management: details of site deliveries, plant on site, wheel wash facilities
- Pollution Prevention: demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan, with particular attention paid to silt mitigation measures.
- Water Quality Monitoring Plan - to include:
 - Details of monitoring methods
 - Frequent assessment of the visual water quality, particularly whilst carrying out bridgework, or working in or near the watercourse.
 - Instructions to notify NRW in the event of a pollution being caused.
 - A requirement to stop work and review further measures in the event that existing pollution mitigation is not effective.
 - Details of triggers for specific action and any necessary contingency actions, for example the need to stop work, introduction of drip trays, make use of spill kits and shut-off valves.
- Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details.
- Biodiversity Management: details of tree and hedgerow protection; invasive species management; species and habitats protection, avoidance and mitigation measures.
- Landscape/ecological clerk of works to ensure construction compliance with approved plans and environmental regulations

The CEMP shall be implemented as approved during the site preparation and construction phases of the development.

Justification: A CEMP should be submitted to ensure necessary management measures are agreed prior to commencement of development and implemented for the protection of the environment during construction.

Biosecurity Risk Assessment

Condition 6: No development or phase of development, including site clearance, with the potential to impact on Japanese knotweed or Himalayan balsam shall commence until a site wide Biosecurity Risk Assessment has been submitted to and approved in writing by the Local Planning Authority. The risk assessment shall include measures to control, remove or for the long-term management of Japanese knotweed and Himalayan balsam during site-clearance, construction and operation. The Biosecurity Risk Assessment shall be carried out in accordance with the approved details.

Justification: To ensure that an approved Biosecurity Risk Assessment is implemented, to secure measures to control the spread and effective management of invasive non-native species at the site.

Land Contamination

Condition 7 - Land affected by contamination

No development shall commence until the following components of a scheme to deal with the risks associated with contamination at the site, has been submitted to and approved in writing by the Local Planning Authority.

1. A preliminary risk assessment which has identified:
 - o all previous uses
 - o potential contaminants associated with those uses
 - o a conceptual model of the site indicating sources, pathways and receptors
 - o potentially unacceptable risks arising from contamination at the site
2. A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.
3. The results of the site investigation and the detailed risk assessment referred to in (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
4. A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

The remediation strategy and its relevant components shall be carried out in accordance with the approved details.

Justification: To ensure the risks associated with contamination at the site have been fully considered prior to commencement of development, as controlled waters are of high environmental sensitivity; and where necessary remediation measures and long-term monitoring are implemented to prevent unacceptable risks from contamination.

Condition 8 - Contamination verification report

Prior to the occupation of the development a verification report demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved in writing by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include a long-term monitoring and maintenance plan for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan. The long-term monitoring and maintenance plan shall be carried out in accordance with the approved details.

Justification: To ensure the methods identified in the verification plan have been implemented and completed and the risk associated with the contamination at the site has been remediated prior to occupation or operation. To minimise the risks to both future

users of the land and neighbouring land, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors.

Condition 9- Unsuspected contamination

If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this unsuspected contamination shall be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be carried out as approved.

Justification: To ensure the risks associated with previously unsuspected contamination at the site are dealt with through a remediation strategy, to minimise the risk to both future users of the land and neighbouring land, and to ensure that the development can be carried out safely without unacceptable risks. A site investigation may not uncover all instances of contamination and this condition ensures that contamination encountered during the development phase is dealt with appropriately.

Condition 10- Surface water drainage

No infiltration of surface water drainage into the ground is permitted other than with the express written consent of the local planning authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to controlled waters. The development shall be carried out in accordance with the approved details.

Justification: To prevent both new and existing development from contributing to or being put at unacceptable risk from or being adversely affected by unacceptable levels of water pollution.

Condition 11 - Piling

No development shall commence until details of piling or any other foundation designs using penetrative methods sufficient to demonstrate that there is no unacceptable risk to groundwater have been submitted to and approved in writing by the Local Planning Authority. The piling/foundation designs shall be implemented in accordance with the approved details.

Justification: Piling/foundation details should be submitted to ensure there is no unacceptable risk to groundwater during construction and methods/design are agreed prior to the commencement of development or phase of development.

Informative / advice to applicant:

The treatment and disposal of contaminated soils and groundwater is regulated by waste legislation and requires an environmental permit.

Excavated materials that are recovered via a treatment operation can be re-used on-site under the [CL:AIRE Definition of Waste: Development Industry Code of Practice](#). This

voluntary Code of Practice provides a framework for determining whether or not excavated material arising from site during remediation and/or land development works are waste.

Developers should ensure that all contaminated materials are adequately characterised both chemically and physically, and that the permitting status of any proposed on-site operations are clear. If in doubt, Natural Resources Wales should be contacted for advice at an early stage to avoid any delays.

Other Matters

Our comments above only relate specifically to matters included on our checklist, *Development Planning Advisory Service: Consultation Topics* (September 2018), which is published on our [website](#). We have not considered potential effects on other matters and do not *rule out the potential for the proposed development to affect other interests*. We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our [website](#) for further details.

If you have any queries on the above, please do not hesitate to contact us.

Flood Risk Activity Permit – advice for the applicant

You will need to apply for Flood Risk Activity Permit from NRW. All Permit applications must be approved prior to the commencement of any works and due to the stand-alone nature of the legislation must be sought alongside any granted planning permission.

Please contact Carl Llewellyn at carl.llewellyn@cyfoethnaturiolcymru.gov.uk to discuss the Flood Risk Activity Permit requirements. Please see our website for further details: <https://naturalresources.wales/permits-and-permissions/flood-risk-activities/flood-risk-activity-permits-information/?lang=en>

If you have any queries on the above, please do not hesitate to contact us.

Yn gywir / Yours faithfully

Mrs Claire McCorkindale

Cynghorydd - Cynllunio Datblygu / Advisor - Development Planning
Cyfoeth Naturiol Cymru / Natural Resources Wales