

David Periam  
Development Management Manager  
Planning Department  
Oxfordshire County Council

Date: 3<sup>rd</sup> August 2017  
My ref: 17/01634/PREAPP  
Your ref: PRE.047/17  
Please ask for: Rob Fowler  
Email: rfowler@oxford.gov.uk  
Direct Dial: 01865 252104

Dear David,

**Proposal: Request for Pre-Planning application advice by the Environment Agency for the Oxford Flood Alleviation Scheme at land from North of Botley Road to New Hinksey in the parishes of North Hinksey, South Hinksey and Kennington**

Thank you for consulting the City Council on the Environment Agency request for pre-application advice.

The City Council is of the view that this is a District matter for it to determine. Any purported exercise of jurisdiction by the County Council would therefore be ultra vires and of no effect. However, in order to regularise the position, the City Council has agreed/will agree to delegate authority to the County Council to exercise its functions as LPA in this case. The City Council reserves the right to rescind this delegation at any time.

It is under this understanding that this advice is provided to the Environment Agency via Oxfordshire County Council.

In the cover letter provided in their pre-planning application submission (Ref. IMSE500177/OFAS) the Environment Agency asked a series of specific questions. Please find below our response to these questions.

**Required documents**

Further to documents listed by the Environment Agency in appendix 1 of the draft Planning Statement the following Oxford City Council would also expect to see in the full planning application:

- Construction Traffic Management Plan
- Materials Management Plan
- Detailed Arboricultural Implications Assessments (AIA)
- Site-specific Tree Protection Plans (TPP) (where necessary incorporating Arboricultural Method Statements (AMS)).
- Mapping information provided in the form of GIS shapefile layers .

- Within Design and Access Statement - contextual analysis of landscape character including verified views. How net loss in public open space will be re-provided in relative proximity.
- Within Flood Risk Assessment (FRA) – provide detail as outlined in Appendix E.

## **Planning History**

Oxford City Council is aware of the following applications/proposals which may impact on OFAS application:

- Current:
  - Seacourt Park and Ride Expansion- Ref: 16/02745/CT3
- Pre app:
  - Osney Mead Industry Estate
- Early stages:
  - Other development in and around Redbridge Park and Ride.

## **Area north of Botley Road**

It is of Oxford City Council's opinion that "Option 1"- flood wall/embankment along the very southern edge of the fields north of the Botley Road is the most appropriate.

## **Old Abingdon Road**

From the archaeology point of view we must raise the following concern:

- "Option 2"- the direct channel option through the Old Abingdon Road Norman Causeway- would result in substantial harm to the scheduled monument. The monument is of national significance and one should also note that there are only a handful of such causeways of this date and character north of the Alps.

However, if during the determination of the application it is considered that, on balance there is sufficient justification for Option 1 because of the impact on the functionality of the Oxford Flood Alleviation Scheme would be jeopardised then this may be acceptable.

## **Archaeology**

Please refer to email dated 31.07.17 subject: OFAS trial trenching WSI from David Radford to Catherine Grindey outlining his feedback and approval of the revised archaeological Written Scheme of Investigation and proposed trench plans submitted by Catherine Grindey from the Environment Agency.

We have received revised details today relating to the WSI and we may need to provide revised or additional information as a result.

## **Green Belt**

In principle, subject to the detail, the development is an appropriate use within the Green Belt.

However the scheme sits within an 'exceptional' landscape with an Internationally recognised skyline as its backdrop and should therefore reflect this quality and opportunity in the schemes design.

### **Air Quality**

The most recent monitoring data (ASR 2017) shows that Oxford continue to breach the annual mean limit value for nitrogen dioxide (NO<sub>2</sub>). There is still considerable action required in order to secure our compliance with the European Directive, and it is therefore essential that air quality is properly considered during planning application procedures for any major schemes within the city's boundaries.

The following documents within the pre-planning application package have been reviewed in reference to air quality:

- Cover Letter: Request for Pre-application advice – Oxford Flood Alleviation Scheme, prepared by Environment Agency, dated 22<sup>nd</sup> May 2017;
- Technical memorandum: Oxford Flood Alleviation scheme – Environmental Update, prepared by CH2M, dated May 2017;
- Pre-Planning Statement, Oxford Flood Alleviation scheme, prepared by CH2M, dated May 2017;
- General Overview Plan (Drawing), prepared by CH2M, dated March 2017;
- Additional supplementary information provided by Environmental Agency on exact entering and exit points of the Lorries of this scheme.

The review of the above mentioned documents allows Oxford City Council to agree in general, with the type of approach taken forward regarding the content and the considerations for the air quality assessment to be presented for the scheme. There are, however, some considerations that need to be accounted for.

Please see Appendix A for the full response from Oxford City Council's Air Quality Officer.

### **Tree planting**

Please refer to email dated 01.08.17 subject: Discussion with City about Seacourt Mitigation from Helen Vaughan-Evans to Richard Harding outlining suggestions for 0.6-0.7ha of land for tree planting and habitat creation.

Please see Appendix B for the full response from Oxford City Council's Tree Officer.

### **Viewpoints**

Oxford City Council would expect the applicant to carefully consider the landscape and visual impact of the scheme and for clear evidence and rationale to be provided as part of the full planning application.

Following observations to make on how the scheme could be improved:

- Provide justification for the design of the street furniture, bridges etc and how they respond to the context of the city's environment.
- There are significant views across the site from the Raleigh Park and Boars Hill view cones. Changes to the landscape within these areas will have a significant impact on the setting of the city and should be fully assessed through the design process. Landscape and Visual Impact Assessment (LVIA) should be used as a tool to design the scheme.

With regard to the viewpoints chosen, the applicant will need to consider views in and out of the city as well as within the site, seasonality and the impact on the night sky if there is lighting proposed. The LVIA should be carried out in accordance with Guidelines Landscape and Visual Impact Assessment 2013 and OCC Assessment of the Oxford View Cones 2015. The City Council can provide additional advice to the applicant with regard to viewpoints and scope of Design and Access Statement and LVIA documents.

### **Planning Policy**

All the key policies in Oxford's Development Plan appear to have been covered in the Planning Statement.

### **Other Matters**

Oxford City Council consulted the Flood Mitigation Officer, Ecologist and Land Quality Officer and their full responses are provided in Appendix C, D and E.

I hope these comments are helpful. I should add that the opinions and comments expressed are those of officers only and they cannot be held binding on the district council.

Yours Sincerely

Rob Fowler  
Development Management Team Leader (West)

## **Appendix A- Full response from Oxford city Council's Air Quality Officer**

### **OXFORD CITY COUNCIL MEMORANDUM**

**FROM**  
**Pedro Abreu**  
**Air Quality Officer**  
**Environmental Sustainability**

**TO**

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#### **17/01634/PREAPP - review Oxford flood alleviation scheme**

The following documents have been reviewed:

- Cover Letter: Request for Pre-application advice – Oxford Flood Alleviation Scheme, prepared by Environment Agency, dated 22<sup>nd</sup> May 2017;
- Technical memorandum: Oxford Flood Alleviation scheme – Environmental Update, prepared by CH2M, dated May 2017;
- Pre-Planning Statement, Oxford Flood Alleviation scheme, prepared by CH2M, dated May 2017;
- General Overview Plan (Drawing), prepared by CH2M, dated March 2017.

#### **Summary**

Oxford's Flood Alleviation scheme will manage the flood flow from the Sea court stream, Bulstake stream and Hinksey stream channels. The scheme will increase the proportion of river flow, which passes down the Sea court stream and/or the new two-stage channel during a flood event, thereby reducing the frequency of flooding in local area. Build hard defences will also be built (each a combination of bunds and walls), to protect houses and an industrial estate, which would otherwise continue to flood even with the reduced water levels during flood events, and a number of new culverts and bridges which are needed to maintain access routes.

#### **Air Quality Approach**

The reviewed technical memorandum refers to an air quality assessment to be produced that takes into account the impacts of dust, considering impacts from demolition, earthworks, construction and track out on human and ecological receptors. It is stated that the dust assessment to be produced will follow IAQM guidelines (2014).

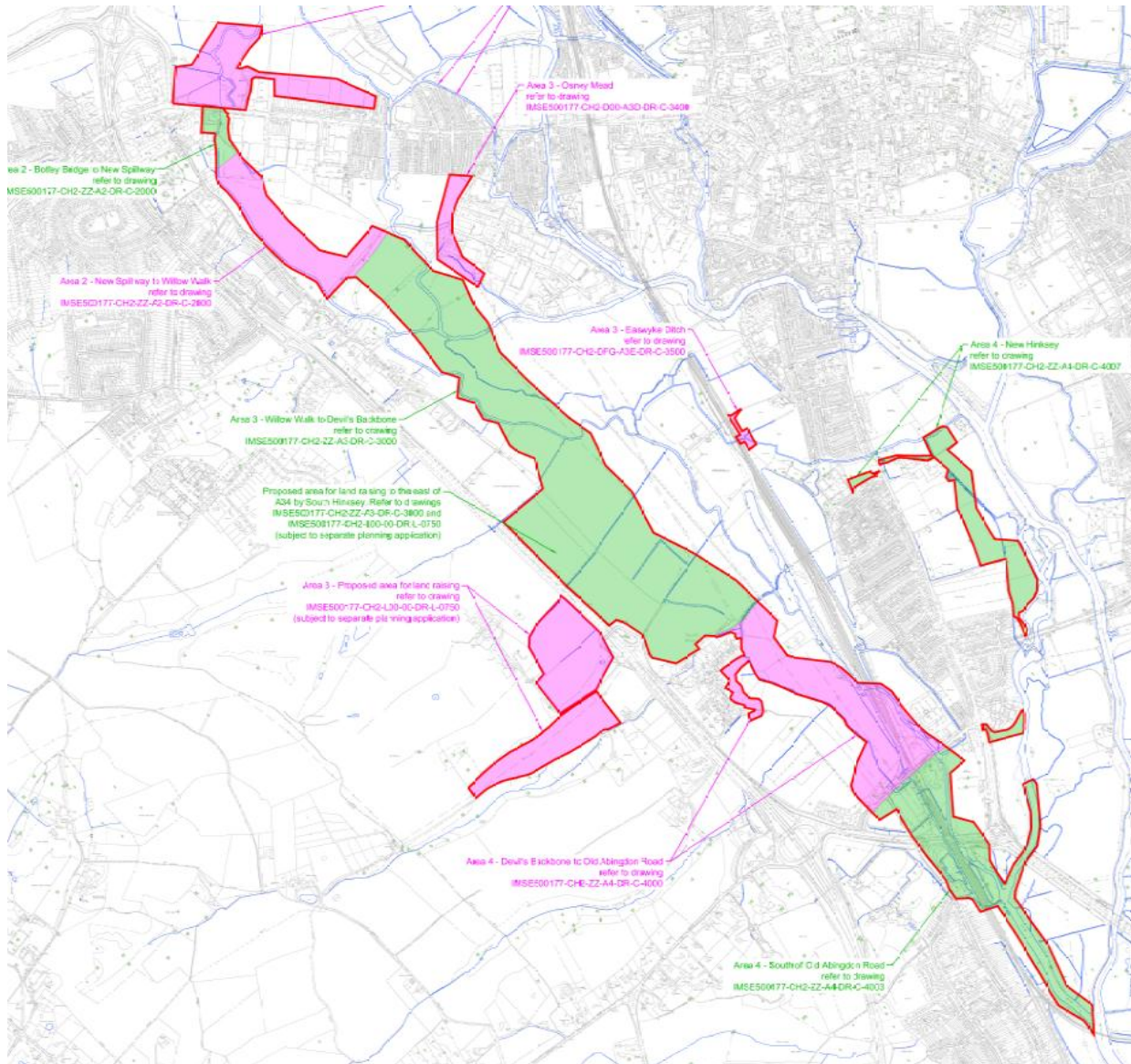
It is also stated in the same document that the proposed air quality assessment will also contemplate the potential impacts of an increase of NO<sub>2</sub> emissions from traffic during the construction works, which will be properly assessed using a detailed Gaussian dispersion model (ADMS-Roads), following DEFRA Guidelines LAQM TG (16). A traffic and transport impact assessment will also be undertaken.

The reviewed document: Cover Letter – Oxford Flood Alleviation Scheme, sent by the Environment Agency to Oxfordshire County Council on the 22<sup>nd</sup> May 2017 also

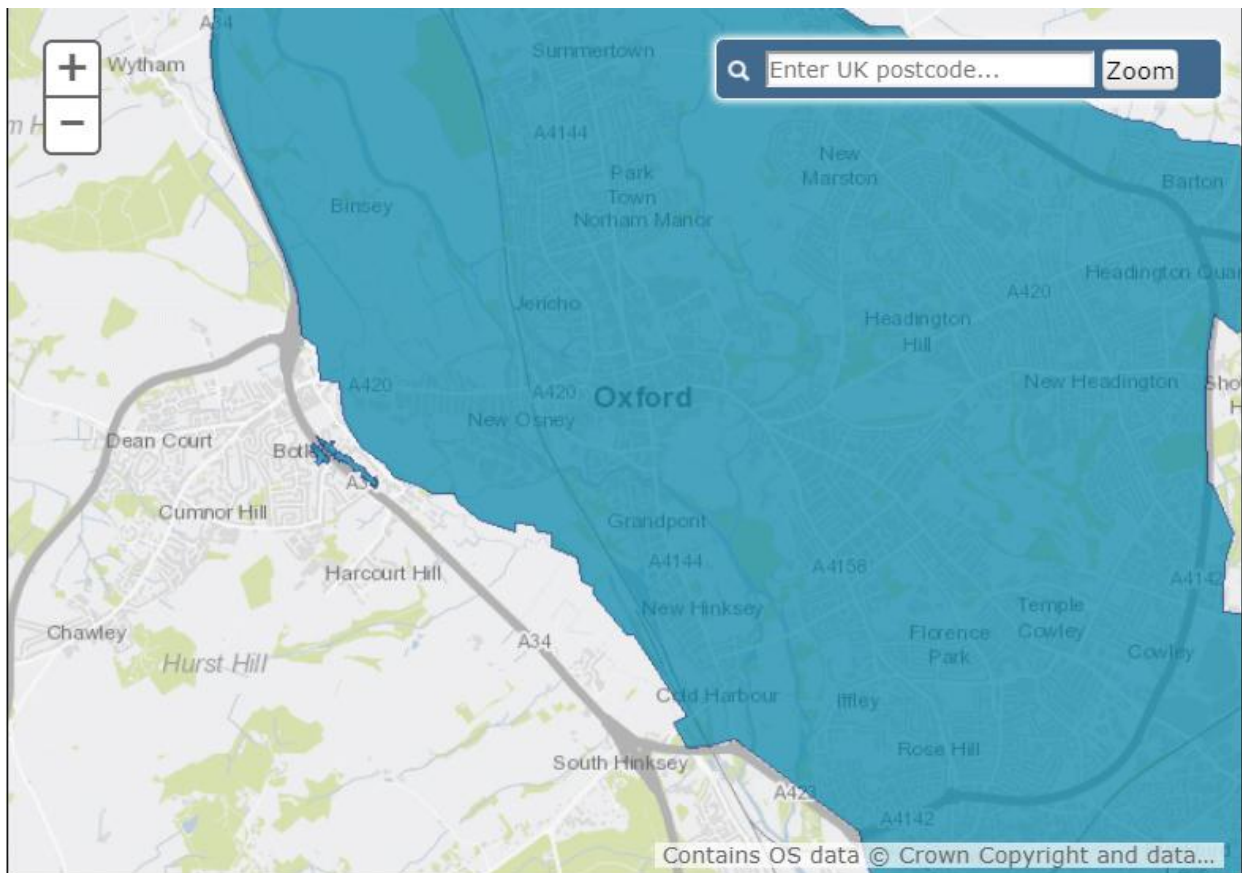
draw some considerations regarding Air Quality (Page 2):

*“Air Quality – our proposal in terms of reducing lorry movements and Traffic Management Plan will conform with the direction of Oxford City Council’s and Oxfordshire County Council’s joint Air Quality Management Plan (2014). Our main site compound and transport routes are outside the zone covered by Oxford’s Air Quality Management Order 2010.”*

### Oxford’s flood alleviation scheme - General Overview Plan



## Oxford's Air Quality Management Area for Nitrogen Dioxide (zoomed in)



### OCC's Air Quality Officer Comment (24/07/2017)

The most recent monitoring data (ASR 2017) shows that Oxford continue to breach the annual mean limit value for nitrogen dioxide (NO<sub>2</sub>). There is still considerable action required in order to secure our compliance with the European Directive, and it is therefore essential that air quality is properly considered during planning application procedures for any major schemes within the city's boundaries.

The review of the above mentioned documents allows me to agree in general, with the type of approach taken forward regarding the content and the considerations for the air quality assessment to be presented for the scheme. There are, however, some considerations that need to be accounted for.

It is my understanding that the potential Air Quality Impacts of this scheme will fall under 2 vectors, both related with the carrying of works during the construction phase. There will be no estimated air quality impacts during the operational phase of this scheme.

#### Vector number 1: Emissions from HDV's and LDV's

An air quality study will have to be conducted, in order to be able to assess what will be the contribution of an increase in NO<sub>2</sub> traffic emissions as a result of the amount

of HDVs and LDVs that will be required for operation during the construction phase of the scheme.

The study should be able to assess the current level of exposure of all existing receptors to NO<sub>2</sub> (before the beginning of works – without construction) along the roads and areas where lorry movements will occur, based on the latest air quality monitoring data results of ASR 2017, and any other type of available resource (ex: DEFRA's baseline modelled maps, regional background plus grid source, etc).

The study should also be able to predict the impact of increases of NO<sub>2</sub> emissions due to lorry's increase through the conduction of the modelling exercise proposed, as well as the prediction of air quality (future baseline) without the implementation of the scheme. Both modelling exercises need to take into consideration:

- Local meteorology (the met data to be used to feed the model needs to be representative of the site/area that is being modelled) – Met data from Brize Norton RAF in Carterton - 21km or Benson -18km are considered to be good meteorology representatives of the surrounding area;
- Geography (any particular canyons and elevated roads, receptors, buildings) need to be included and considered in the modelling exercise;
- Traffic design (the right area needs to be modelled, the right roads, junctions, and **the forward traffic projections need to match with the ones of the traffic impact assessment**);
- Verification (against automatic/non-automatic monitoring undertaken in the area) and the uncertainty of the model;

It is important to consider that there will be areas of the scheme (ex:New Hinksey) that are still inside the city's AQMA. New Hinksey lies within a relatively sensitive area of the city for Air Quality – Abingdon road, where NO<sub>2</sub> data over the last 4 years have been on intermittent breach of the annual mean limit value of 40 ug m<sup>-3</sup> that Oxford City Council is required to comply with, under the 2008/50/EC directive.

On the other hand, and although it is confirmed that the biggest area of intervention seems to fall outside the city's AQMA it is also true that its location along the border zone of the AQMA can result on a significant increase of exposure of NO<sub>2</sub> emissions to receptors inside the AQMA, especially if it is taken into account that material movement along haul road and into and out of city has a frequency of 1 vehicle every 5 mins, with an estimation of the construction work activities to last over the next 3 years (quite significant).

**This needs to be considered when the air quality assessment is undertaken.**

It is stated that the main lorry route will be the A34 and the interim lorry road that will be built along the major construction site along the channel, at New Hinksey Lane. A part from the assessment of the effect that an increase of NO<sub>2</sub> emissions will have in those areas, one must also consider any potentially sensitive receptor inside the AQMA. It is also important that special consideration is also given to the entrance and exit points of the main construction site, as those correspond in many cases to locations within the city's AQMA, and will therefore potentially increase the amount of



traffic jams, and emissions to residents in the area

Information of the exact entering and exit points of the lorries, as well as information about all the tracks and roads that will be used/ covered by the scheme will have to be therefore given upfront, so that an assessment can be properly made for the identification of any potentially sensitive receptors that might be subject to poor air quality, and also to see if the current monitoring network conducted by OCC is adequate, and covers all the areas of the scheme. If some “blind spots” are identified as a results of the information provided, non-automatic monitoring will have to be conducted for a period of at least 6 months (according to LAQM TG (16), comprising preferably three summer and three winter months – to account for possible season variations of the results, in order to be able to gather enough information to be used on the Air Quality modelling exercise.

**It is therefore essential that this information can be given upfront, and prior to the submission of the pre-application if possible, in order to be able to increase efficiency. If it is proved that extra air quality monitoring is required; it will take 6 months before those procedures can be concluded!**

**It will also be required that any HGV's /LDV's used in the scheme are euro 6, in order to minimise the impacts from emissions from those vehicles at start**

Vector number 2: Impact of dust emissions resultant from any construction phase activities

As proposed on the technical memorandum, the assessment will also have to consider potential air quality impacts during the construction phase. Most recent Guidance on the Assessment of Mineral Dust Impacts for Planning May 2016 by IAQM is already available and should be followed instead of the proposed one from (2014).

The Dust assessment study should consider:

- the establishment of baseline conditions of the existing dust climate around the site of the proposed operations;
- the identification of site activities that could lead to dust emission without mitigation;
- the identification of site parameters which may increase potential impacts from dust;
- Recommendations for mitigation measures, including modification of site design; and
- The inclusion of proposals to monitor and report dust emissions to ensure compliance with appropriate environmental standards and to enable an effective response to complaints.”

Other considerations:

- The location of residential areas, schools and other dust-sensitive land uses should be identified in relation to the site, as well as proposed or likely sources of dust emission from within the site.
- The assessment should explain how topography may affect the emission and dispersal of site dust, particularly the influence of areas of woodland, downwind or adjacent to the site boundary, and of valley or hill formations in altering local wind patterns.
- The assessment should explain how climate is likely to influence patterns of dispersal by analysing data from the UK Meteorological Office or other recognised agencies on wind conditions, local rainfall and ground moisture conditions.

## **Air Quality Officer comment 2 (31/07/2017)**

New information of the exact entering and exit points of the Lorries of this scheme has been given upon previous request.

The analysis of the provided plans, have allowed the identification of 6 potentially sensitive areas for Air Quality within the scheme. Those will be described below, together with the appropriate air quality comment.

### **1 – Access and exit for the Works at Osney Mead via Botley Road (Area 3)**

This area is located within OCC's Air Quality Management Area, and it is therefore extremely sensitive from the Air Quality point of view. Is the access going to be made via Ferry Hinksey Road? OCC measures NO<sub>2</sub> in the corner of Botley Road with Hill View Road (60 m) away from Ferry Hinksey Road. The latest Air Quality Monitoring data (2016) indicated an NO<sub>2</sub> annual mean value of 40ugm-3, which is currently the annual mean limit value for NO<sub>2</sub>.

The measurement taken at this particular place can therefore be considered (due to its proximity) representative of the poor existing air quality of the area. Potential sensitive receptors include the residential area along Ferry Hinksey Road (where annual limit value for NO<sub>2</sub> apply), and the huge amount of parking places along Osney Mead Industrial estate, where the hourly mean limit value for NO<sub>2</sub> apply). There is also the potential Air Quality impact of an increase of traffic emissions along Botley road, particularly along the A34 –Botley road corridor, until the turn at Ferry Hinksey Road. Those impacts needs to be properly assessed through the conduction of the modelling exercise described on my first AQ comment 1 (above), and using data from OCC's network available in the area (see ASR 2016 or ASR 2017).

### **2- Main access and exit location for the construction works via A34 Southern bypass road (South Hinksey)**

This area is located outside the OCC's AQMA, and its jurisdiction belongs to South and Vale Council. Potential sensitive receptors include the residential area along manor road (west). Oxford Air Quality website seems to indicate that air Quality monitoring has been conducted in the area in 2015 by the responsible LA (See Diffusion tube South Hinksey at Oxfordshire Air Quality Website ). The latest known

value was of 31  $\mu\text{g}/\text{m}^3$ . It needs to be checked if monitoring has been made at that same location during 2016. If yes, the results can and should be used in the Air Quality Modelling exercise described above. If not, it is highly advisable that Air Quality Monitoring is conducted at that location for at least 6 months (according to specifications provided in AQ comment 1 above). The residential areas of Manor road (east) and St Lawrence road are also going to be extremely close to the proposed area 3 for land raising to the east of A34 by South Hinksey and area 4 Devil's backbone to Old Abingdon Road. It is also advisable to conduct monitoring work at this location before the commencement of works.

### **3 – Access to Area 2 in Botley Road for delivery and small vehicles (Seacort stream). Access not for Haulage vehicles)**

This area is located inside OCC's AQMA. The increase of delivery and small vehicles along the "A34 – Botley corridor" will also need to be accounted for on the air quality assessment exercise described in point 1. The close proximity with Seacourt Nature Park also forces compliance with Annex 8 of the 2008/50/EC directive, with regards to the critical levels of NO<sub>2</sub> for the protection of vegetation (annual mean of 30  $\mu\text{g}/\text{m}^3$  (NO<sub>x</sub>))

It is also important to refer that North Hinksey Lane Road closely follows the boundary of Area 2 – New spillway to Willow Walk. This can very easily turn into a very sensitive area, due to the several residential areas along this road that can suffer from the impacts of dust from construction site and NO<sub>2</sub> emissions from site traffic along areas 2 and 3. NO<sub>2</sub> annual limit value will apply at this location. This area is outside OCC's AQMA. It is highly advisable to engage with the responsible LA and conduct monitoring at this location prior to the commencement of works (also and according with specifications provided in AQ comment 1 above).

### **4 – Access to site (Area 1) Haul route for removal of material via seacourt Park & Ride access**

The area is located inside OCC's AQMA. Potential sensitive receptors include users of Seacourt Park and Ride Parking, Employees/Users of Johnson's of Oxford Parking, and several shops/services - the hourly mean limit value for NO<sub>2</sub> applies in this area.

Monitoring should be conducted in this area, as this location is not currently being covered by OCC's Air Quality monitoring network. The existing air quality of this area will need to be assessed so that this information can be used to feed the modelling exercise described above.

### **5- Main access and exit for constructing the northern site**

Potential sensitive receptors outside the AQMA: Travellers' community at Red Bridge Hollow (Residential area) – annual mean limit value for NO<sub>2</sub> apply to this area

Monitoring should be conducted in this area, as this location is not currently being covered by any LA's Air Quality monitoring network. The existing air quality of this area will need to be assessed so that this information can be used to feed the

modelling exercise described above. It is highly advisable to engage with the responsible LA (South and Vale) and conduct monitoring at this location prior to the commencement of works (also and according with specifications provided in AQ comment 1 above).

Potential sensitive receptors inside the AQMA: users of red bridge park & ride, Oxford Camping & Caravanning Club a church and some shops along the old Abingdon road. (Annual and Hourly mean limit values apply. Monitoring should be conducted in this area, as this location is not currently being covered by OCC's Air Quality monitoring network.

## **6- Access to Area 4 – New Hinksey**

Is the access going to be made through Abingdon Road? Air Quality Monitoring is being monitored by OCC in Abingdon Road (Abingdon's Road with Weirs Lane/Wash & Go. NO<sub>2</sub> data on these locations over the last 4 years shows that they have been on intermittent breach of the annual mean limit value of NO<sub>2</sub>. This is therefore considered to be a sensitive area for Air Quality. It is important that measures are undertaken to make sure Air Quality doesn't increase in the area as a result of the scheme. The Air Quality impacts of associated emissions from construction activities and traffic increase will need to be properly assessed also in this area, through the conduction of the modelling exercise described on my first AQ comment 1 (above), and using data from OCC's network available in the area (see ASR 2016 or ASR 2017).

## **Summary / Final Conclusions of this review**

- An air quality assessment will have to be conducted considering in general all the aspects described on my AQ comment 1 above and including in specific all the 6 identified air quality sensitive areas mentioned on my AQ comments 2
- Additional Air Quality monitoring will have to be conducted in 6/7 new locations, as they represent OCC and other LA's air quality blind spots in what are considered to be sensitive areas – places that are not currently being covered by the existing Air Quality monitoring network and that are estimated to suffer from air quality impacts as a result of the implementation of the scheme. The new locations are to be agreed with the LA that has the legal duties to monitor Air Quality in those areas
- According to Government's guideline LAQM TG 16 this monitoring needs to be conducted for at least 6 months, comprising preferably three summer and three winter months – to account for possible season variations of the results
- The results obtained need to be included on the required Air Quality modelling exercise, so that air quality in those areas can be properly assessed and the results of the monitoring could

help providing an accurate estimation of the future/potential Air Quality impacts of the activities proposed in the scheme

- It is recommended that a map of Oxford, with the totality of the expected lorry routes could be clearly shown at pre application stage, together with, if possible a list of names of those roads, as well as the exact entry/exit address locations of the scheme pin pointed in the map and listed below, to cross check with the information gathered on this review.

## **Background**

One of the 12 Core Planning Principles of the National Planning Policy Framework (NPPF) states that planning should:

“contribute to conserving and enhancing the natural environment and reducing pollution” by “preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability”.

(Paragraph 109)

The NPPF goes on to say:

“Planning policies should sustain compliance with and contribute towards EU Limit Values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local Air Quality Action Plan.”

(Paragraph 124).

The following is a saved policy from the Oxford Local Plan 2001-2016 after the adoption of the Core Strategy:

### *POLICY CP.23 - AIR QUALITY MANAGEMENT AREAS*

*Planning permission will not be granted for development which would have a net adverse impact upon the air quality in the Air Quality Management Area, or in other areas where air quality objectives are unlikely to be met.*

The whole of the city was declared as an Air Quality Management Area (AQMA) for nitrogen dioxide in 2010.

Oxford City Council include the following guidance on air quality on their website:

Air Quality can be a material consideration in the planning process for development proposals, particularly if the application may:

- Conflict with proposals in our Air Quality Action Plan;
- Lead to a deterioration in air quality as a direct result of the proposal;
- Increase human exposure in areas of existing poor air quality.

## Appendix B- Full response from Oxford city Council's Tree Officer

# Planning Consultation Response

<b>To:</b>	Robert Fowler
<b>From:</b>	Chris Leyland (Design, Heritage and Specialist Services)
<b>Location:</b>	Oxford Thames Flood plain
<b>Proposal:</b>	Oxford Flood Alleviation Scheme - Environment Agency
<b>Application number:</b>	17/01634/PREAPP
<b>Date sent:</b>	27.07.2017

### Scope:

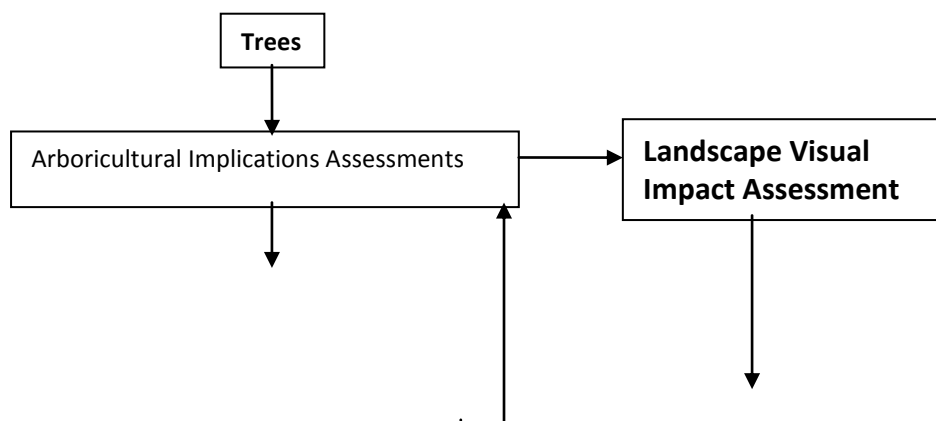
This advice note considers the implications of the various flood alleviations scheme options proposed by the Environment Agency (EA) in specific relation to trees and landscape issues in reference to the Council's adopted policies CP1, CP11, NE15, and (NE16).

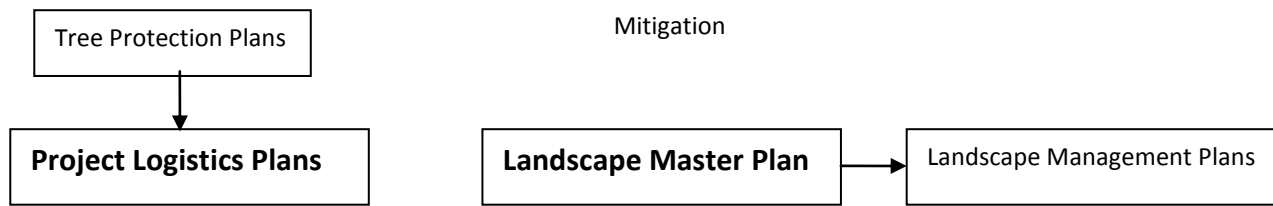
### Advice

The impact to landscape character and appearance through tree and hedgerow losses will be locally significant in some key areas. These impacts must be mitigated through appropriate replacement tree planting plans; tree numbers, planting locations, patterns and species selections should be informed by a detailed Landscape Visual Impact Assessment, and form part of proposals within an overarching Landscape Master Plan. Within this framework there is an opportunity to contribute to the conservation of the native black poplar by incorporating it into landscape plans and by using genetically diverse source material.

As preparatory work towards a full planning application, detailed Arboricultural Implications Assessments (AIA) should be carried out within each proposal area. The AIAs should be used to inform both the Landscape Visual Impact Assessment and also site-specific Tree Protection Plans (TPP) (where necessary incorporating Arboricultural Method Statements (AMS)). This body of work should be carried as an arboricultural specialism within the project planning team, and in accordance with BS.5837:2012-*Trees in relation to design, demolition and construction – Recommendations*.

### Fig.1: How trees should be integrated into the strategic planning





### **Assessment Comments**

The scale and complexity of the scheme dictates that arboricultural impacts and associated mitigation measures should be considered in the context of landscape setting; i.e. through a Landscape Visual Impact Assessment (LVIA); the LVIA should be informed by area-specific Arboricultural Implications Assessments that take into account the indirect impacts of construction logistics, e.g. temporary vehicle routes, construction compounds, etc.

Locally, the most significant visual impacts will be around the West Way in Botley and in Hinksey Meadow. The excavation of the proposed 2-stage flood channel involves the loss of a wet-woodland area north of the West Way, west of the Seacourt Stream; and other riparian trees on the southside of the road to the east of the Seacourt Stream, as well as further southwards to Willow Walk; this large area includes Seacourt Park owned by Oxford City Council and Hinksey Meadow; the whole area receives frequent use by walkers. Trees will be lost along the eastern bank of the Seacourt Stream, which are important for the setting of the meadow and for screening.

Between North Hinksey and South Hinksey the grain of field boundaries is broadly east-to-west; this pattern will be disturbed by the proposed 2nd- Stage channel construction. The impact on hedgerows, individual trees and a number of small copses will be perceived primarily from higher ground outside the city boundary, e.g. Boars Hill and Hinksey Heights, which are within the Oxford View Cones. This will be a significant landscape change, although it is understood that the field pattern is relatively recent in origin (i.e. post medieval). If carefully planned and controlled the resulting scheme should generate its own positive landscape visual qualities.

The 2nd Stage channel involves a lowering of existing ground levels by 1-2m, which results in all trees within these areas being lost, with limited or no potential for replacement planting within the areas; there is also a risk that unless sufficient land is secured for tree planting then there could be a net loss in tree cover. In tandem with consideration of nationally rare grassland NVC types- the potential for a net loss of tree coverage must be considered seriously, particularly as the flood plain affords the potential to create rare wet woodland habitat.

The scheme has the potential to combine biodiversity/habitat improvements with enhancement of a semi-natural riparian visual landscape character. There is also a rare opportunity for a significant contribution to be made towards the conservation of the native black poplar (*Populus nigra* Subsp. *betulifolia*). Black poplar is one of Britain and Ireland's rarest trees. Black poplar used to grow in the natural floodplain forests which lined the banks of rivers in Europe; however, much of this habitat has been lost since the 17<sup>th</sup> century through such processes as urbanisation, land drainage and canalisation of rivers. Forest Research (Forestry Commission) advise that because the natural pattern of genetic distribution has already been disrupted by

cultural practices it is appropriate to plant a range of genotypes using genetically diverse material rather than attempt to promote local provenience genotypes; See - Conservation of Black Poplar (*Populus nigra* L.)- Information Note: Forest Research- Joan Cottrell -May 2004.



**Appendix C- Full response from Oxford city Council's Ecologist (advice also provided in the officers capacity at Oxfordshire County Council)**

## Planning Application Response

### Pre-application advice - Ecology

<b>To:</b>	Robert Fowler
<b>From:</b>	Sue Lawley CIEEM, CEnv, Ecology Officer, Environmental Quality Team, Oxford City Council
<b>Site:</b>	Land from North of Botley Road to New Hinksey in the parishes of North Hinksey, South Hinksey and Kennington
<b>Detail:</b>	Oxford Flood Alleviation Scheme
<b>Application number:</b>	
<b>Date sent:</b>	03 August 2017

**Comments:**

I have reviewed the documents submitted including technical drawings of the scheme, indicative landscape plans and the Environmental Update (EnvUpdate).

I have tabulated at the end an abbreviated version of my response to the Scoping Consultation for the Scheme, with notes as to how different issues have been addressed. Where issues appear to need some minor further consideration these are highlighted in orange. Where key issues (blue highlight in table) remain outstanding these are summarised below, together with additional concerns arising from the current consultation:

#### **Environmental update**

##### Key changes

Page 3 –The objective to have an overall benefit for ecology, and the use of the Defra metric to assess this are welcomed. How will impacts on, and benefits to habitats (e.g. tall ruderal,) and any key local species outside the NERC S41 list be assessed?

##### Table 1

Groundwater / fluvial studies - The involvement of the Floodplain Meadows Partnership (FMP) is particularly welcome as it will be key to achieving success in avoiding impacts on and restoration of floodplain grassland, particularly MG4. Any report from FMP should be included in an appendix to the ES, and a justification provided if their advice cannot be followed.

##### Table 2

6 – recreation and access - improvements to green infrastructure at Osney Mead are welcome, provided that biodiversity is given priority at this important site, should there be any conflict.

### **Outstanding issues**

#### Long term management

The long-term management and monitoring of the scheme and created habitats should be secured to ensure that ecology benefits beyond the construction and site restoration phases.

#### Habitat restoration

Imported seed sources should be avoided, using natural regeneration, locally harvested seed or green hay. Local sources have the advantage of creating a market for important sites and thus strengthening their viability.

#### Need for updated protected species surveys after 12 months

Protected species surveys are generally valid for 12 months so if works are planned to occur more than 12 months after the date of the initial survey then the survey will need to be updated. These should be referenced in the ES and allowed for in the CEMP where appropriate.

### **Further comments**

#### Hinksey Meadows Local Wildlife Site

Loss of habitat - probable reduction of, and hydrological damage to, MG4 grassland at this site remains a major concern, and the involvement of the FMP (page 7, EnvUpdate) is to be commended. Any reports produced by FMP should be appended to the Environmental Statement (ES), together with an explanation of how the advice has been followed. My note in the table below refers to possible involvement of FMP in advice on habitat restoration throughout the scheme using green hay.

#### Creeping marshwort (*Apium repens*)

Dr Judy Webb has commented to the Environment Agency directly with regard to this species. The species requires appropriate management and very specific conditions. Dr Webb, who is an expert on *Apium repens*, expresses concern regarding the survival of this species due to cumulative effects of the OFAS. Oxford is the only UK location for this threatened species and it is most important that Dr Webb's recommendations are implemented. These include:

- A plan for the conservation of the plant before, during and after the scheme
- Cultivation of a reservoir of the plant over several years in a safe facility.

#### Construction Environment Management Plan (CEMP) and role of Ecological Clerk of Works (ECoW)

On a scheme of this extent, in order to reduce environmental impacts I would expect to see a plan of how construction will be managed in environmental terms, through a CEMP or similar. How ecological on-site advice will be provided also needs to be clarified, for example through the role of ECoW.

Issue raised at scoping	How addressed in current consultation	Comment
<b>Overarching issues</b>		
The scope of the area to be included needs to cover all land and structures that are directly or indirectly affected by the scheme. This includes hydrological effects and the movement of vehicles; plus the effects of mitigation work.	These now considered in various assessment approaches, including air quality and hydrology	
There should be a net gain of biodiversity over the entire scheme. At present it is not clear how this will be assessed. We recommend the use of a habitat impact assessment metric, based on metrics developed as part of the DEFRA biodiversity offsetting pilot scheme.	EnvUpdate Page 3 refers to an overall benefit for biodiversity, and the use of the Defra biodiversity metric.	Changes to scheme welcomed.
The long-term management and monitoring of the scheme and created habitats should be secured to ensure that ecology benefits in the long term.	Ecological Management Plan referred to in EnvUpdate (p15)	No apparent reference to timescale for restoration and aftercare or long-term management
<b>Local Wildlife Sites (LWS) and Sites of Local Importance for Nature Conservation (SLINC)</b>		
<b>Protected and notable species</b>		
The site and its surroundings include records and/or potential habitat for, some protected and notable species including bat species, otter, water vole, great crested newt, badger, hedgehog, bullhead, toad, slow worm and depressed (compressed) river mussel.	These now covered, either through survey or through TVERC data searches	I note that importance of spawning and migrating are now scoped in, including reference to bullhead, which is welcome. However there is only reference to available information. This is reasonable if good, recent information is available. However if information is poor then fish surveys should be carried out.
Otter surveys should include temporary lying-up places so that disturbance can be avoided during the construction phase.	Pre-construction survey and otter design features now built in.	
<b>European protected species (EPS)</b>		
Protected species surveys are generally valid for 12 months so if works are planned to occur more than 12 months after the date of the initial survey then the survey will need to be updated.		This is now covered for otter, but other species survey updates are not apparently mentioned. These should be referenced in the ES and allowed for in the CEMP where appropriate.

<b>Environmental Data</b>		
At an early stage records of protected species and sites (including LWSs and SLINCs), and details of habitats, should be obtained from Thames Valley Environmental Records Centre (TVERC).		This is implied in Table 2 of the EnvUpdate, but not specified.
Consideration should be given to the wider context of the site for example in terms of habitat linkages and protected species populations in the wider area, to assist in the impact assessment.	Now considered in ES Chapter 8	
Information generated from the various habitat and species surveys (existing and future work) should be made available to TVERC. Ideally species data should be summarised as an annex to reports; a suitable format for this can be specified if required.		Not specifically referenced.
<b>Compensation &amp; Enhancement</b>		
The Request for Scoping opinion makes reference to Bulstrake Stream as a fish migration route and states that a new weir could compromise this; new structures that are barriers to fish should be avoided as part of the scheme.	Bulstrake stream now designed as a backwater	This is welcomed as an overall habitat improvement for fish species.
While there is reference to new river habitat, there appears to be little reference to opportunities to re-naturalise river habitats by the creation of backwaters, riffles etc.	Re-naturalisation of river habitats now included in scheme design (page 3 EnvUpdate)	
<b>Habitat Restoration</b>		
Imported seed sources should be avoided, using natural regeneration, locally harvested seed or green hay. Local sources have the advantage of creating a market for important sites and thus strengthening their viability.		No apparent reference to this in EnvUpdate . However the involvement of the Floodplain Meadows Partnership is appropriate and the scope of their input could perhaps be expanded to add advice on this.
Meadow creation in general is best carried out on poor soils with low nutrient content; reinstatement of topsoil is unlikely to be the best preparation for these areas. This should be considered at an early stage because it is clear that the movement of substrates is a key engineering consideration.	A soil resource survey to be carried out in Summer 2017	This is welcomed as it will inform the restoration proposals.
<b>Potential for recreation conflict with biodiversity</b>		

<p>Increase in recreational use should not compromise the important grassland habitats of the area, including the extensive management of habitats by grazing livestock and hay cropping. Direct conflicts between people and livestock are an obvious concern; an indirect effect also of concern is the fouling of hay crop by dogs making it unsellable.</p>		<p>This could be covered under section 12 of the ES, but is not apparently referenced in any of the sections</p>
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<b>Key</b>
Issue resolved
Not resolved and expanded in current response
Partially resolved, but further consideration required.

## **Appendix D: Full response from Oxford City Council's Land Quality Officer**

### **OFAS – Pre-app Questions**

#### **Comments from Land Quality – Paul Scott**

1. Required Documents: It would be useful to have the mapping information in the form of GIS shapefile layers that could be uploaded onto the Land Quality GIS system. I would make it easier then to cross-reference against known areas of potentially contaminated land, such as former landfill sites.
2. I am not aware of any other planning applications, other than the Seacourt P&R expansion scheme which may impact on the OFAS proposals.
3. Area North of Botley Road. Other than the Seacourt Park and Ride site, which may present a limited potential contamination risk, I am not aware of any other potentially contaminated sites in the vicinity of Botley Road that may be intercepted or affected by the OFAS proposals near Botley Road.
4. Old Abingdon Road. There are several locations south of Old Abingdon Road (Area 4 South plan) where the OFAS proposals appear to interfere with existing landfill and made ground deposits which are likely to be contaminated. In particular, this includes the former Abingdon Road Landfill site. A phased investigation and risk assessment would therefore need to be carried out to determine impacts to the watercourse and other nearby receptors from disturbance of the filled ground. Appropriate mitigation would then be required to prevent any significant harm being caused to these receptors in the short, medium and longer term. This would be secured through the inclusion of appropriate planning conditions on any permission granted.
5. Other potentially contaminated sites. The tilting weir proposal at Easwyke ditch in Area 3 may impact an area of filled ground. As with the Abingdon Road proposals, there would be a planning requirement to carry out appropriate works to investigate potential contamination risks and mitigate any significant risks as necessary.
6. Planning Conditions. As stated in 4 above, any potential land and water contamination risks from the OFAS proposals would normally be dealt with through the addition of planning conditions to secure safe development and to prevent any residual liability falling on Oxford City Council, should pollution or contamination issues occur in the future as a result of the development.

## **Appendix E: Full response from Oxford City Council's Flood Mitigation Officer**

### **Flood Risk and Drainage**

#### **Planning application response**

Planning Reference: 17/01634/PREAPP

Location: Oxford

Description: Oxford Flood Alleviation Channel

Technical Officer: M. Bunn

Response Type: Comment

Case Officer: Rob Fowler

Date of Response: 25/07/2017

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Technical Officer Comments:

#### **Assessment**

The report provides that a Flood Risk Assessment (FRA) will be provided. It is recommended that any FRA makes reference to the Flood Risk Vulnerability Classification in accordance with National Planning Policy Framework. From this it should also be made clear if the Sequential Test or the Exception Test in accordance with NPPF is relevant.

The development is essentially flood control infrastructure, which is a Water-Compatible Development which is a permissible development within all flood zones as long as it is designed and constructed to:

- remain operational and safe for users in times of flood;
- result in no net loss of floodplain storage;
- not impede water flows and not increase flood risk elsewhere.

Any Flood Risk Assessment report should address the above information. Notwithstanding the following also is to be included:

- Existing land survey data.
- Existing and proposed modelling (based on land survey data and detailed plans).
- Provision of plans which indicate the existing flooded area and volume for a range of event (not just the 1 in 100).
- Proposed plans which demonstrate the areas and volume which water is expected to be displaced to, for a range of event (not just the 1 in 100).

Details of level for level volume for volume flood storage compensation where appropriate to the scheme are to be provided.

- A register of flood nodes which includes the pre-existing modelled flood level and any future level for a range of event (not just the 1 in 100 year event). This should be completed not only in downstream and upstream but also within the Oxford and Kennington residential/commercial areas, given these areas are most likely to experience changes in flow regimes. Details of both levels and flow volumes and velocity's throughout the existing and proposed channels are to be provided. Both newly modelled discharge volumes and velocities will need to be shown that they are the same as existing modelled rates at the termination of the channel.
- An assessment of any backwater effects (afflux) on any tributary which will be intercepted from the newly proposed channel(s) will need to be provided. This would need to be done for not only on the main water courses (main rivers like Cherwell, Thames, Boundary Brook, Northfield Brook, etc.) but also the ordinary water courses and drainage ditches. Details of any backwater effects will need to be provided and examined with an aim to show how (or if) water will be directed towards properties. If adverse effects are identified, recommendations on how these effects will be eliminated and details of any residual flood risk within these other watercourses will need to be explored.
- An assessment of the proposal in terms of flood risk from other sources such as foul and storm water sewer flooding, ground water flooding and all other relevant sources. Particular attention should be given to sewer flooding within area which bunds will be constructed over sewers mains, or where head pressures will result in discharges from the both foul and storm water sewer. Details around sewers should be discussed with both Thames Water, The County Council as the Lead Local Flood Authority, and the Drainage Engineers of the district councils.
- Detailed construction plans of the proposal which include but are not limited to the following;
  - Layout plans with proposed surface level data and details of all control structures.
  - Proposed channel cross section and long section (including any small tributaries and/or ditches), showing existing levels, proposed invert/bank level, and modelled hydraulics levels.
  - Plans of any and all flood defence structures.
  - Pipe and culvert long sections and details, including levels.
  - Details of location, depth and size of existing sewers, foul and storm water as well as highways and other associated drainage that it is likely to, or could be affected by head pressure changes from the proposed scheme.
  - Details of how the proposed scheme will deal with flood risk from other sources such as sewer up rise and discharge, ground water rise from underground aquifers, and other sources.

## **Maintenance**

Maintenance of the proposal will need to be addressed. Details of the required following will be required to ensure the effective ongoing function of the development;



- A register identifying all flood prevention structures.
- Type of maintenance to be undertaken on each structure.
- Details and description of any required inspections and frequency of inspections requires for each structure.
- Details of the frequency of maintenance and types of inspection required.