Planning Statement

March 2018

Prepared by CH2M on behalf of the Environment Agency
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Introduction

1.1 Purpose of the document

This Planning Statement has been prepared by CH2M on behalf of the Environment Agency. It is written to support a full planning application for a scheme to reduce the risk of flooding to Oxford, creating more space for water within the western floodplain of the city – the Oxford Flood Alleviation Scheme (OFAS). The Environment Agency is working with partners, Oxfordshire County Council, Oxford City Council, Vale of White Horse District Council, Thames Water, Thames Regional Flood and Coastal Committee, Oxford Flood Alliance, Oxfordshire Local Enterprise Partnership and University of Oxford, on the OFAS.

This document outlines the proposal, provides an assessment as to how the proposals accord with national planning policy and policies in the development plans, and justifies the location of the development within the Green Belt.

1.2 Background

In 2010, the Environment Agency published the Oxford Flood Risk Management Strategy, which provided a detailed study of the flood risk from rivers in Oxford. The strategy described how flood risk can be managed in Oxford over the next 100 years. Additionally, Oxfordshire County Council, as Lead Local Flood Authority, developed a Local Flood Risk Management Strategy for Oxfordshire in 2016 to set a long-term programme for reducing flood risk in the county.

1.3 The Purpose of the Scheme

The purpose of the scheme is to manage the flood risk to Oxford over the next 100 years, reducing the frequency of flooding by creating more space for water within the existing western floodplain of the city. The scheme addresses flooding from the main channel of the River Thames and from the Hinksey and Bulstake Streams. The scheme will be approximately 5km long, it will run from north of Botley Road down to south of the A423 southern by-pass where it re-joins the River Thames. It will include lowering parts of the floodplain to create a two-stage channel of the type shown in the diagram below, providing space for water for flood flows within a wider channel cross section. It also includes working on some of the existing rivers and streams that run through it, to make more space for water and reduce flood risk to the city. In some areas new flood walls and embankments will be built, and existing temporary defence locations will be utilised as a permanent solution.

1.4 The Need for Development

If nothing was done to manage flood risk, approximately 2,500 properties would be at risk in a flood that has a 1 in 100 (1%) annual risk of occurring. The Environment Agency’s existing flood risk management activities reduces this but around 1,500 properties still remain at risk. This proposal will reduce the likelihood of flooding for all of these properties, with over 1,200 benefitting from a standard of protection greater than a 1 in 100 (1%) annual risk of flooding on opening. If we don’t take action the impacts of climate change means that 3,431 properties will be at flood risk in 50 years’ time in the same event. This threat of climate change will not only increase the extent of flooding, but its frequency and disruption to the city.

Flooding within Oxford also causes transport disruption, with frequent closure of the railway line and main roads to the west (Botley Road) and the south (Abingdon Road) of the city. These roads are important for access to the city by cars, buses (including Park and Ride) and bicycles. The scheme will also offer greater resilience to important utilities such as the sewer network, electricity sub- stations and broadband communications.
The results of the detailed design modelling done for the scheme show that all properties in Oxford that are currently at risk of flooding from the River Thames, will have their flood risk reduced when the scheme is in place.

### 1.5 Structure of Planning Statement

This report contains the following information:

- Section 2 Description of the site and surrounding area;
- Section 3 Description of the proposed scheme;
- Section 4 Summary of specialist reports accompanying this planning application;
- Section 5 Planning policy review;
- Section 6 Greenbelt Statement; and
- Section 7 Key Challenges and Constraints
- Section 8 Conclusion.

### 1.6 Other Supporting Documents submitted with the application

The following standalone documents will be submitted alongside this Planning Statement in support of our proposals.

- Statement of Community Involvement
- Environmental Statement covering all topics as agreed during the EIA Scoping exercise, and pre-planning application
- Flood Risk Assessment
- Materials Management Plan
- Utilities Statement
- Contamination Report

### 1.7 Drawing List and Visualisations

The following tables contain a list of drawings submitted with the Planning Application.

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The Site and Surroundings

2.1 Site Location and Description

The proposed OFAS will enhance the River Thames floodplain to the west of Oxford City Centre. It extends from slightly north of the A420 Botley Road to south of the A423 ring road, running predominantly between the A34 to the west and the Oxford to Didcot railway line to the east.

The scheme will reduce flood events from various channels of the Thames during the winter. This winter flooding is part of the normal functioning of the river and will be managed more effectively to limit its impact on the urban setting of Oxford.

2.2 Planning History

We have undertaken a review of Planning History within the working area of the scheme and there are two applications that we are aware of at present that need to be considered.

The first is Oxford City Council’s proposals to expand the Seacourt Park and Ride car park which was granted permission on 12 March 2018. This planning application (Reference 16/02745/CT3) is on land adjacent to our proposed scheme. The application proposes:

“Extension to the existing Seacourt Park and Ride to accommodate new car parking, a single storey building to provide a waiting area and toilets for customers, cycle parking, lighting, CCTV, ticket machines, new pedestrian and cycle access, landscaping together with reorganisation of the layout of existing car parking spaces, repositioning of turning circle, bus pickup and drop-off and other works incidental to the development.”

We waited until the design of the Seacourt Park and Ride proposal was known before finalising our proposals in this area. Our proposals for secondary defences here include a wall the runs around the west and southern side of the park and ride extension. This wall extends further south along the back of the gardens, reducing the impacts on trees and local badger habitat as the wall has a smaller footprint than an embankment. The defence then reverts to an embankment and incorporate a habitat creation embankment as best practice. The remaining section returns to a wall to reduce encroachment on the Bulstake Close Allotments.

The second application is one that was identified in the pre-application consultation. The County Council is developing an improvement scheme at Hinksey Hill Interchange, with works provisionally programmed to take place in 2017/18 and 2018/19 and we have been discussing potential construction timescales with them.
Description of the Proposed Scheme

3.1 Introduction

This section sets out the OFAS proposals for which planning consent is sought.

3.2 Proposals

Construction of a new channel, between the A34 to the west and the railway to the east, to the west of Oxford city centre. The channel will extend south-easterly from the confluence of the Botley and Seacourt Streams lying approximately 0.6km north of Botley Road, to just south of Kennington (approximately 0.3km south of the A423 ring road). The new channel will carry excess flow from the Seacourt Stream, Bulstake Stream and Hinksey Stream channels during a flood event, thereby reducing the water level in the main River Thames and so reducing the frequency of flooding in built-up areas. The channel will comprise two stages:

1. First stage channel – this will be the inner part of the channel which will be permanently wet and carry flowing water all of the time; and
2. Second (or ‘two-stage’) channel – this will be created by lowering the ground between 1m and 1.5m to one or both sides immediately adjacent to the first stage channel. The second stage channel will be dry for most of the time but when river levels are sufficiently high, water will naturally flow along the second stage channel once the lower first stage channel is full. This may occur regularly during wetter periods, especially during the winter months. During large flood events, the fields in the existing floodplain around the new channel will also continue to be inundated. This wider second stage channel is designed to fill and convey further flood water flows up to bankfull.

In some local areas, a second stage channel will be constructed without a first stage channel and vice versa. The scheme also includes:

- Provision of new flood defences (embankments and walls) to protect properties which would otherwise continue to flood even with the reduced river levels;
- Provision of new culverts and bridges to cross highways and footpaths to maintain access routes;
- Installation of flood gates for access (under normal, non-flood, conditions) through the new defences noted above;
- Creation of new and/or improved habitat for flora, fauna and fisheries, where it does not compromise flood defence or other environmental receptors. This habitat creation/restoration forms part of the integrated design of the Scheme to help mitigate habitat losses, to meet WFD measures and support England Biodiversity 2020 habitat creation targets e.g. new wetland habitat within the footprint of the second stage channel, new channel connecting the Bulstake and Hinksey Streams, in-channel habitat improvements including scrapes, ponds and backwaters. The wetland features in the second stage channel will incorporate a variety of profiles and gradients, to include marginal shelves, steep banks and undulating bed profiles to maximise wetland habitat diversity;
- Removal of Towles Mill, in conjunction with a separate scheme at the upstream end of the Seacourt Stream, this will facilitate fish passage around Oxford for the first time in over a century;
- Change of use of land to provide exchange for existing open space;
• There will be 3 telementry cabinets located at different points across the scheme; and
• Eastwyke Ditch flood control structure.

3.3 Landscaping proposals

Detailed landscaping proposals including landscape management and maintenance plans are provided with the planning application. The Green Belt designation has informed these proposals by seeking to maintain the openness of the Green Belt through appropriate scheme design.

Reinstatement of areas of land affected by temporary construction works will include replanting with native trees and shrubs that are resilient to climate change, as shown on planting plans that have been produced for the Scheme (and submitted with the planning application). All reinstatement proposals will be discussed and agreed with affected landowners. Where subsoil in fields is unavoidably compacted due to use as compounds and access routes, it will be decompacted prior to reinstatement.

We have produced a Landscape and Habitat Management Plan, which sets out the long-term landscape and habitat management proposals for areas of land affected by the Scheme and for the proposed habitat mitigation areas. This plan has been prepared in conjunction with the detailed landscape design produced by Gillespies, which provides detailed management guidelines for the first five years in respect of all soft landscaping areas.

3.4 Construction phase

We estimate that the main earthworks will take three calendar years, which is approximately 15 months of works due to the need for a winter break each year when the ground is too wet. In advance of the main works commencing, there will be several months when the contractor will be setting up facilities, diverting/protecting services, carrying out environmental mitigation works and removing vegetation. In addition to the main earthworks, further heavy construction activities will be needed, including building flood bunds. Overall, we expect the OFAS will take three years to be completed with planting being undertaken as areas become available.

3.5 Maintenance

As mentioned above, a Landscape and Habitats Management Plan is submitted with this planning application. This plan details the 5 year management and establishment of the landscape and habitats associated with the scheme. It provides further details for the following 5 to 10 years and principals for the longer term management. We aim to promote the management of the area in a way that is as sustainable as possible, requiring little intervention. This will ensure that it is maintained as an open, informal open space area.

Oxfordshire County Council request a 25 year Landscape Management plan for development of restoration sites. Although this is not set down in policy we understand the need to demonstrate that the restoration of the development is secured beyond the initial 5 year period. We are happy for a more detailed Landscape and Habitat Management Plan to be required by a Condition imposed on any planning permission granted.

The nature of the scheme when operational means that the maintenance of the scheme as a whole is inextricably linked with the landscape and habitat management. We are committed to securing maintenance for the scheme for the lifetime of the development (100 years). We are discussing the future maintenance of the scheme with our partners, landowners and stakeholders to establish a way of partnership working which will provide a robust plan for sustainable maintenance. One of the options in consideration is the establishment of a Charitable Incorporated Organisation. The Environment Agency has an ongoing interest, operational budgets and capabilities to contribute towards maintenance of the channel as part of its wider routine maintenance for the whole of the
Oxford river systems. The establishment of the partnership approach to maintenance would ensure the efficient and successful management of the multipurpose land associated with the scheme.
Summary of other supporting information

4.1 Introduction
This section provides a short summary of all the supporting documents that accompany this planning application. This enables this document to be read as an overarching document that sets out the proposals and provides a full justification for them.

4.2 Statement of Community Involvement
This document explained the extensive consultation and engagement that has been undertaken with stakeholders, including: the public, landowners, environmental stakeholders and other people interested in the scheme, whilst seeking to develop our proposals with their input and explain and talk through any issues.

We have complied with the requirements of planning policy and best practice. Moreover, given the amount of consultation and events held and the resources that the Environment Agency have put into this, we have gone far beyond this in the number, range and extent of the consultation that has been undertaken. This is a reflection not only on the importance of the scheme, but also the weight that as an organisation is placed upon consultation and interaction.

As a result of the consultation and engagement work, the SCI concluded that our scheme has evolved into one that is not only fit for purpose, but is also sympathetic to consultation feedback given.

4.3 Environmental Statement

4.3.1 Introduction
An Environmental Impact Assessment (EIA) has been undertaken for the Scheme in accordance with the requirements of the Town and Country Planning (EIA) (England and Wales) Regulations 2011 (SI 2011 No. 1824). EIA is a process to assess the likely significant environmental effects of a proposed project together with ways to avoid or reduce any negative environmental effects.

The document covers a lot of issues but the following sections set out the environmental impacts of the scheme and the actions we will take.

4.3.2 Local community
The Scheme will benefit the local community by reducing the flood risk to approximately 1,500 houses and commercial properties, infrastructure and recreational assets in Oxford. The Scheme will reduce flood risk to employment zones that have been protected by local planning authorities, and some of the existing businesses (notably those along Botley Road, Abingdon Road, the grounds of and access to Oxford Spires Hotel and those within adjacent retail/business parks and industrial estates to the Scheme) that will be temporarily affected during construction. Such changes will have associated positive effects on the health of those living, working and visiting the area.

There will be some unavoidable but temporary disruption (notably land-take, access disturbance, service diversions, localised noise and increased traffic) during the main construction works. Measures to minimise any nuisance and reduce anxiety for nearby residents, recreational users and businesses have been identified and we will keep the local community fully informed of the nature and timing of the works.
4.3.3 Recreation and public access

The Scheme will provide a long-term reduction in the risk of flooding to many recreational assets (including public rights of way, public access land, parks and recreation grounds) in Oxford. There will also be improvements to some of the new bridges in the Scheme area with enhanced surfaces, fencing, railings and signage, which will benefit those using the affected public rights of way (e.g. at Willow Walk bridleway and North Hinksey Causeway footpath). We have also re-designed the railings on Devil’s Backbone bridge, to provide an opportunity for the path to be upgraded to a cycleway in the future. However, there will be some negative impacts on recreational users (horse-riders, pedestrians and cyclists) during construction including temporary restricted access to parts of the floodplain and to small boats, canoes and anglers on the Bulstake and Hinksey Streams in the Scheme area. The Scheme will result in the temporary and permanent loss of public open space, and some allotment gardens, all of which will be re-created elsewhere within the Scheme area.

Some temporary and/or permanent closures of a bridleway, footpaths and cycleways will be required, resulting in increased walking/cycling distances along alternative public rights of way or to alternative bus-stops during temporary closure of Old Abingdon Road (and bus route 35). There will also be some traffic on existing pedestrian, cyclist and equestrian routes that will be managed. Measures to minimise disruption to recreational users have been identified and we will continue to consult those affected during construction of the Scheme.

4.3.4 Landscape and visual amenity

Changes to the local landscape and views will be inevitable during construction due to the loss of vegetation and mature trees in the footprint of the Scheme, the temporary presence of construction vehicles, construction compounds, vehicular movements, and the earthworks and excavations. Initially, these impacts will be particularly prominent at Seacourt Nature Park, Hinksey Meadow, Willow Walk and Devil’s Backbone public rights of way, Kendall Copse and Kennington Pool Local Wildlife Site.

After 15 years from Scheme completion, when planting will have become established, there will only be significant impacts on the views and landscape at Kendall Copse due to the new culverts/bridges and new channel. At this time, the vegetation within the copse will be nearing maturity, helping to integrate the new bridges and channel into the landscape.

We have sensitively designed the Scheme to minimise impacts on landscape features of high value such as mature trees and nationally rare grassland meadows. We will create new woodland, wetland meadow and grassland areas to replace those lost during construction and to enhance the landscape in areas where it is currently less valued. Wherever possible, existing vegetation within the boundary of the Scheme will be retained to integrate the proposals with the surroundings. In the long-term, the landscape and ecological design of the new channel will enhance the experience of walking, cycling, riding or boating in the area.

4.3.5 Wildlife

The Scheme will create new and improved areas for wildlife (including fish). These areas will help replace habitat losses arising from the Scheme and support government targets for habitat creation, as follows:

- The second stage channel will be grazed by cattle to create floodplain grazing marsh and include many wetland features, creating a new wildlife corridor.
- The wetland features in the second stage channel will incorporate a variety of depths, dimensions and gradients, to maximise the diversity of wetland wildlife.
- The habitat in the existing streams will be improved and the new channel has been designed to maximise biodiversity.
• The removal of Towles Mill weir, in conjunction with a separate scheme at the upstream end of the Seacourt Stream, will enable fish movement around Oxford for the first time in over a century.

Although the Scheme is designed to avoid impacting on wildlife sites, wherever possible, the Scheme is likely to result in the loss of 2ha of nationally rare grassland in Hinksey Meadow. Established woodland and trees in the footprint of the new channel and flood defences will also be lost. There is also the risk of losing Creeping marshwort plants from one of only two UK sites due to temporarily reduced grazing during construction of the Scheme and potential groundwater changes. We are therefore taking action to ensure the survival of this species and will monitor its population during and following completion of the Scheme. We will create new wildlife areas to balance the loss of ecologically valuable habitats and ensure there is an overall gain for plants and animals. Where possible, we will recreate habitats in the same location as they are currently, to increase the chance of success. We will carefully remove and replant the 2ha of Hinksey Meadow that is on the route of the second stage channel. We will also create 17.8ha of new meadow.

Approximately 15.8ha of new meadow will be created in an area between Bulstake Stream and Hogacre Ditch, between the new second stage channel and the railway, and 2.0ha in an area just north of South Hinksey, between Hinksey Stream and the new second stage channel. The loss of part of Hinksey Meadow, will be of much higher value than the newly created meadows, until they have had time to develop their ecological interest. We will plant 9.7ha of new woodland to replace up to 398 individual trees and 60 groups of trees, which we will need to fell. Due to the need to minimise the number of obstructions in the second-stage channel, there will be fewer Oxford Flood Alleviation Scheme trees on river banks than there are at present, meaning less wet woodland and more lowland mixed deciduous woodland.

Surveys have identified that birds, bats, reptiles, amphibians, badgers, water voles and otters are or could be present in various locations across the Scheme. These are legally protected and we have therefore taken precautionary measures to minimise risks to them. We will use good practice procedures for work near water to ensure that no contaminants or silt are released that could affect wildlife or their habitats. Invasive weed species are present within the Scheme area. Treatment of Himalayan balsam and Japanese knotweed is on-going and will continue for five years following Scheme completion, or until the land is returned to its current owner, in line with best practice.

4.3.6 Water

There is potential for accidental pollution of the Seacourt, Bulstake and Hinksey Streams, and groundwater, during construction. Our contractors will follow strict guidance to avoid causing pollution, especially when working near water. Landscaping and re-planting to stabilise soils will be undertaken as soon as practicable following earthworks.

We have modified the design of the Scheme to minimise any additional lowering of groundwater levels and affecting areas of wildlife value during periods of dry weather flow. Our modelling has shown there will be no changes to the water regime that might affect the designated conservation sites of Port Meadow and Iffley Meadow that lie outside of the Scheme area. At Hinksey Meadow, we have designed the Scheme to ensure groundwater levels remain similar (or marginally higher) than pre-Scheme levels during a dry year. Similarly, no significant changes are anticipated during an “average year.” Dry year groundwater levels beneath the northern and central part of Hinksey Stream and the associated ponds are predicted to slightly rise or remain similar to pre-Scheme levels. There may be a slight drop in groundwater levels in the vicinity of the new channel, particularly to the west of it, increasing in scale (typically in the range of 10 to 40cm) in the area between South Hinksey and Old Abingdon Road. This will not significantly affect water in the adjacent streams and ditches. We will however monitor groundwater changes as part of the Scheme design. The Scheme will result in the removal of some river
structures to improve fish passage, improvements to channel habitat and the creation of new and improved wetland habitat.

4.3.7 Cultural heritage

Construction of the Scheme will change and remove or partially remove some known and potential archaeological remains and historic structures, identified through extensive archaeological field investigations. These features predominantly date from the prehistoric and post-medieval periods, and include North Hinksey Causeway, Willow Walk, an enclosure of possible Roman date, and areas of prehistoric activity.

Additionally, the Scheme will affect the Old Abingdon Road culverts; a Scheduled Monument and medieval historic causeway considered to be of national importance. Through expert advice and continued liaison with heritage stakeholders, we refined the Scheme design to avoid greater archaeological impact on this Scheduled Monument. There will also be some impacts on the historic landscape, mainly changes to the current Hinksey Steam and Bulstake Stream, which have been mitigated through sensitive design of the Scheme.

We will carry out archaeological mitigation prior to and during the works, which will comprise a range of techniques at different locations of heritage value. These techniques include excavation and recording buried archaeological remains, measuring and mapping existing earthworks and landscaping. Where high value heritage assets have been identified and will be significantly affected such as the scheduled Old Abingdon Road culverts, we will carry out further targeted field investigations to record the buried archaeological remains. We will also enhance the setting of these culverts through the installation of information boards. We will also carry out excavations where significant effects on buried heritage assets have been identified. A watching brief, which is when the construction is monitored by an archaeologist to identify and record archaeological remains, is proposed for the site of a former mill at Botley.

The completed Scheme will provide a reduced flood risk to a variety of sites of historic interest including Listed Buildings within South Hinksey, Grandpont, New Hinksey and Abingdon Road, as well as Templeton College and Iffley Lock, Conservation Areas, Scheduled Monuments and other heritage assets.

4.3.8 Traffic and transport

As with most projects of this nature, there will be some traffic disruption during construction, from new access routes to construction sites, and from construction related traffic.

The main access routes that will be used by construction vehicles for the Scheme will be the A34 via the A420 Botley Road/West Way where we will share access to Seacourt Park and Ride, the South Hinksey Interchange on the A34 and Old Abingdon Road and the A4144 Abingdon Road.

The number of vehicles required and the proposed duration of works equate to approximately one vehicle movement each way on the A34 every 5 minutes during working hours while earthworks are being undertaken. This peak traffic level will apply for approximately 21 months within the three-year construction period.

During construction, Old Abingdon Road and Kennington Road will be closed for up to 15 months, which will disrupt traffic for those accessing the A423 Southern By-Pass and the A4144 Abingdon Road and looping around the Hinksey Hill interchange and Kennington roundabouts. The temporary closure of Old Abingdon Road will also affect bus services along route 35, which operates between the city centre, Kennington and Abingdon.

We will manage this transport disruption and increased traffic flows through measures described in an outline Construction Traffic Management Plan, which will be finalised in consultation with the Highway
Authorities. We will plan deliveries in advance, keeping the roads clean and providing temporary signage to minimise disruption and maintain access as far as possible during construction. The completed Scheme will help protect the transport network such as local roads and the London/Didcot to Oxford/Birmingham railway line through reduced incidents of flooding and the reduced need for emergency closures of both roads and the railway.

4.3.9 Sustainable use of land

There will be localised impacts on ground conditions and soil structure as a result of changes in land and soil stripping during construction. The Scheme will also affect local farms and associated tenancies from temporary land-take during the construction works and from the division of land. There is potential for the construction works to expose contaminants.

Following completion of the Scheme, there will be a permanent change in wetness of the agricultural land in the footprint of the Scheme due to the increased frequency of flooding. This will affect some local farms, particularly between North and South Hinksey, but most of the second stage will still be grazed during drier months. We will implement appropriate practices to minimise damage to soils (e.g. for example, programming earth movements during summer months) and we will manage risks from soil contamination during construction.

The Scheme will provide an improved standard of protection against flooding for existing land uses including agricultural land and soils, and some small areas of potential contamination within the floodplain.

4.3.10 Air quality

Construction activities are not anticipated to significantly affect local air quality. There will also be elevated dust levels in some parts of the Scheme area, which will be managed to ensure that there are no significant impacts on people or wildlife. During operation, there will be very few traffic movements, related only to periodic inspection and maintenance, which will not affect the air quality.

The Contractor for construction of the Scheme will be required to operate vehicles with low emissions of nitrogen oxides. They will also be required to implement a Construction Environmental Management Plan, which we are preparing and will include a range of best practice mitigation measures to minimise dust and air quality impacts. We will also carry out six months of air quality monitoring before, during and after construction, at a number of locations, agreed with Oxford City Council and the Vale of White Horse District Council.

4.3.11 Carbon, sustainability and climatic factors

The construction of a new channel will produce excavated materials, much of which will require removal from the floodplain, with associated emissions from vehicles. We have sought to re-use some of the excavated materials from ground lowering for landscaping and flood defence (earth bund) construction. We also sought to reduce carbon emissions from transportation of excess material by disposing of a quantity at a land raising area south of Hinksey Heights, but this area has since been rejected due to planning constraints.

We have incorporated environmentally sustainable techniques and materials (e.g. sustainable timber for use in new bridges) into the design of the Scheme. Our design has sought ways to be as sustainable as possible, re-naturalising parts of the river corridor, as well as mitigating any potentially adverse effects that could result from the Scheme. We will re-use the majority of the gravels excavated within the Scheme area for channel improvements (although some of the gravels will be transported off site for re-use in other environmental improvement projects). Our Contractor will ensure the sustainable use and disposal of materials.
4.3.12 **Cumulative effects and inter-relationships**

An assessment has been undertaken of the potential for combined (and cumulative) impacts, related to the various components of the Scheme, and in-combination with other plans and projects. No additional cumulative impacts associated with components of the Scheme have been identified.

There is potential for cumulative impacts with proposals for expansion of a car park at Seacourt Park and Ride (involving new car parking and various facilities including a building, cycle parking and lighting). Our Scheme proposes to use the existing roundabout on Botley Road into the park and ride for construction traffic. There is therefore potential for in-combination impacts on the operation of the park and ride site during construction of the Scheme in 2019 and 2020.

Oxfordshire County Council are currently planning a road improvement scheme at Hinksey Hill Interchange to increase public transport use and reduce traffic pressure on the A34. There is therefore potential for cumulative traffic impacts on the road network around the A423 Southern By-Pass due to the overlap between the works. We will continue to liaise with the relevant councils as the construction programmes of the various schemes are developed to avoid or minimise any in-combination negative impacts on traffic.

4.3.13 **ES Conclusions**

Building the Scheme will cause temporary disruption to the local community, as well as to wildlife and other environmental features. The disruption will last from Winter 2018 until 2021.

The Scheme will create new areas of channel and thus reduce some areas of meadow grassland and trees through which the channel will pass but these losses will be offset by creating woodland, meadow grassland and wetland habitat in other locations. Through consultation and by undertaking an EIA, we have sought to avoid or minimise these impacts to an acceptable level.

The flood defence scheme is expected to bring significant long-term benefits to Oxford by reducing risk of flooding to large areas of the city containing houses, businesses, transport links, public spaces and areas of high historic and amenity heritage value. The Scheme will also deliver an overall gain in important habitats, creating a new wetland corridor that links

4.4 **Flood Risk Assessment**

The consideration of options during the strategy and outline design of the scheme show there are no reasonably available sites for this flood alleviation scheme at lower risk of flooding therefore the Sequential Test is passed. This development is an opportunity to reduce the overall level of flood risk in the area through its layout and form.

The proposed scheme is water compatible and as such does not require an Exception Test. The scheme will be safe for its lifetime and does not create any additional risk to life or property in an event greater than the design standard of the scheme.

The Standard of Protection to over 1200 existing properties is raised significantly from all sources of flooding, in the majority of fluvial cases this is raised to a 1% AEP standard. This study has shown that, in addition to the reduced flood risk to properties, there are further benefits of this scheme. These include lowering depths of flooding and reducing the flood risk to a number of roads and the railway to help keep transport links open longer during flood events and provide economic benefits to the wider business community of Oxford.
Overall, this FRA has demonstrated that the proposed scheme provides a reduced level of flood risk to over 1200 properties within Oxford with no detrimental flood risk impacts to any properties within the city or surrounding areas. Minor variances in predicted flood outlines at isolated locations are identified in the areas downstream of the scheme, up to a maximum of 2cm. However, the results with the scheme in place indicate the same downstream area can show a slight reduction in flood level for one return period and a slight increase in flood level at another return period. This downstream modelling has been verified through an independent review by industry experts.

4.5 Materials Management Plan

4.5.1 General

This management plan was initiated at the outline design stage of the scheme and updated throughout the detailed design process, using the best available data at this stage of the project.

4.5.2 Management Solutions

Disposal to landfill is considered to be a last resort for all inert materials. The modest volume of sands and gravels resulting from the excavation of the scheme will be reused on site as part of the scheme. This will include the creation of a gravel bed and rifles in both existing new and existing watercourses to improve the biodiversity of the river system. Gravels will also be utilised in filter drains to new embankments and for mixing with other materials arising on the site, such as alluvium, to create a suitable material for use as engineering fill to the proposed flood defence embankments. Surplus gravel arising will be removed from the site.

The main surplus material arising from the excavation of the new channel will be alluvium, as noted above this will be mixed with some of the gravels arising to create a suitable material for use in the proposed flood defence embankments. However, this will be a relatively small amount in relation the amount of material being generated. Other options for local raising and landscaping outside of the floodplain are limited due to existing greenbelt designation, infrastructure, protected species, local wildlife sites and geomorphological features. Therefore, the remainder of the surplus materials will need to be removed from the site.

Surplus inert materials will be re-used on other schemes in the Oxford area. Investigations have indicated that the most likely schemes which will be active during the construction period are likely to be gravel quarry restoration schemes with environmental outcomes however other development schemes may become available in the near future and opportunities need to be monitored as the scheme moves towards construction. There are several of these potential sites to the north and west of Oxford.

Any non-hazardous or material with a high organic content, such as dredgings from existing watercourses, will need to be dried and removed to a licenced waste management facility. Temporary working areas include space for some drying of material before removal from site. Materials from historic landfill sites in the Redbridge area which is encountered will be taken off site to a suitable licenced landfill site.

The ground investigation works encountered two small traces of asbestos across the whole of the proposed working areas, therefore it is not expected to encounter more than isolated pockets of hazardous material, if any is found this will need to be taken to a tip licenced to accept hazardous material.

4.5.3 Transport Solutions

Based on the review and analysis undertaken for the for the various transport options available it is proposed that alluvium and topsoil will be excavated using traditional methods utilising GPS controlled 360 degree excavators and removed from site via road transport. Other forms of transport such as barges have limited capacity and still need road transport elsewhere for onward journeys to receiving sites.
Suitable sites for re-use of the materials are being sought to both the north and south of Oxford to enable vehicles to be distributed across the trunk road network and minimise the risk of additional congestion as a result of our scheme. The temporary works layout has been designed to allow the majority of vehicles to directly access the A34 trunk road and minimise the impacts on local roads.

4.5.4 Next Steps

The waste management market place is constantly changing and sites suitable for material re-use are changing with little notice. Some of the management routes identified in this plan may not be available in the future and others will come to the market place.

The CL:AIRE register tries to facilitate the management of materials across construction sites and the Oxford scheme will be registered on this system once planning consent has been achieved.

Positive action is being undertaken to identify suitable re-use routes and locations. We are continuing to monitor the market place to ensure the optimum management routes for re-use of materials are utilised. The Environment Agency’s own delivery programmes will also be monitored to identify sites which could benefit from cohesive material from Oxford. This will ensure that costs are minimised and ensure materials are re-used in the most sustainable manner possible within the prevailing market conditions.

4.6 Utilities Statement

The Utilities Statement outlines the utilities that would be required for the implementation and operation of the Oxford Flood Alleviation Scheme and considers how existing utility assets would be affected by the construction of the proposes works.

Enquiries were issued to the statutory undertakers in accordance with Section C2 of the New Roads and Street Works Act 1991, Section 84 in June 2015 and updated in 2017, to determine the location of existing apparatus. The statutory undertaker’s responses to these enquiries indicate that the following utility companies are affected by the project:

a. Thames Water Utilities Limited
b. Openreach, British Telecommunications (BT)
c. Scottish and Southern Energy (SSE)
d. Vodafone
e. Virgin Media
f. National Grid
g. SGN
h. Unknown providers

The route and design of the works were determined through a process of consultation, technical feasibility and a multi-criteria analysis. One of the criterion in the analysis was to minimize the impact to existing utility infrastructure. However, it was not entirely possible to avoid some conflicts with existing infrastructure; therefore, it will be necessary to divert, lower and/or protect some utilities that cross the Application site.

During the discussions with the utilities companies to develop outline quotations the scheme designers have worked with the companies to ensure that all the proposed diversions are safe, practical, achievable and meet both the requirements of the flood alleviation scheme and the future maintenance of the utilities.

The Environment Agency are continuing discussions with all affected utility providers and requested that C4 stage detailed designs and estimates are prepared for all the proposed protection and diversion works to utilities. This has been commenced prior to the planning application submission to ensure that utility providers undertaking diversion have sufficient lead in times to design the works and procure materials to meet the proposed construction programme once planning permission is granted.
The statutory records also indicate that the Application site is well located to take advantage of existing utility connections, as there are telecoms and electricity running close to the potential required connections for the scheme operation.

Temporary utilities required for site compounds during the construction phase will be established by the contractor directly with the relevant providers for the duration of the temporary site set up. This is currently expected to be for three years.

4.7 Contamination Report

4.7.1 Background

The report was prepared to assess the ground contamination risks and to inform the Environmental Statement.

The contaminative potential of the land beneath most of the Scheme footprint is low, as it is primarily greenfield land. There are some areas of the Scheme with a higher potential for historic contaminative land use: in particular, closed landfills in the vicinity of Old Abingdon Road. Some sections of new channel will be constructed through these landfills.

The report collated the available data on ground contamination from three phases of geoenvironmental ground investigations that have been completed for the Scheme from 2008 to 2017, and the contamination risks associated with soils, soil gas and groundwater/surface water are assessed in the report.

4.7.2 Contaminated Soils

The investigations confirm the presence of typically a few metres of contaminated material in the areas of landfill. A larger body of fill is present in the ground forming the A423 embankments. Over the remaining majority of the Scheme, there is much smaller amount (typically less than 0.5 m) of Made Ground, with much more limited or negligible contaminative potential.

The Scheme design assumes that all excavated Made Ground and any contaminated natural materials will be removed and disposed of to an off-site licensed waste management facility. Similarly, it is assumed that there will be no import of non-natural materials for earthworks. The risks associated with existing soil contamination to human health therefore appear to be limited; and should be dealt with standard measures adopted during the construction process, including:

- a watching brief for potential contaminative material during excavations, with an appropriate sampling regime to test suspected contaminated materials;
- safety measures for site workers when constructing in/on the landfills; and
- protective measures when temporarily storing any known or suspected contaminated soils on site.

4.7.3 Soil Gas

There are some concentrations of soil gas in the landfill areas that are typical of old landfills that have a biodegradable waste component. Production flow rates appear to be low, so there should be limited soil gas risk associated with the Scheme, either to on-site or off-site receptors, provided appropriate safety measures are implemented during the works in/adjacent to landfills, and any new below ground structures have passive ventilation, and a review of migration pathways via the new channel is completed.
4.7.4  Groundwater/surface water

The Scheme typically overlies Alluvium and organic Alluvium clays, over River Terrace Deposits of sand and gravels (an aquifer), over Oxford Clay bedrock. There are many streams and channels directly beneath or adjacent to the Scheme that may have connection to the aquifer, as well as ponds and wetlands.

The River Terrace Deposits aquifer beneath most of the Scheme generally appears to have some but limited amounts of baseline contaminants which reflect contaminants also seen in the local surface water channels. There are leachates showing contamination in the vicinity of the landfills, which are periodically saturated. Groundwater contamination in the underlying aquifer has also been identified at Redbridge; and to a much lesser extent beneath the Kennington Landfills. It is likely that any leachate discharges from the landfills already discharge into the local surface water system to some degree. The sample results to date have not identified any substantial water quality impact on the channels, although these were from periods when leachate heads were low, and concentrations may be higher after prolonged wet conditions.

There are a few other sites with potentially significant groundwater contamination identified beneath the permanent Scheme footprint:

- an area adjacent to the railway line north of Old Abingdon Road;
- an area close to the Hinksey Stream culvert beneath the railway;
- the area close to the A423 culverts; and
- a section of the Hinksey Stream bank at Towles Mill, where anecdotal groundwater contamination has been reported by the EA.

As groundwater control may be required during the deeper excavations (e.g. for the new channel construction), there is the potential that in some areas, contaminated groundwater will be collected during construction and this will need to be either treated, recirculated, or disposed of off-site or to sewer (or treated in-situ prior to excavation). A review of the best way to deal with this for the at-risk areas should be completed once the construction methodology has been established. Methodologies will also need to be prepared that reduce the risk of creation of new pathways via piles or foundations. The new channels through the Kennington and Redbridge landfills will be lined/sheet-piled to be near impermeable, so it is unlikely that there would be a direct new pathway created between the leachate in the landfill and the new channels. However, the presence of new sheet pile sections and the new channel/culvert sections in or near the landfills may change existing groundwater flow paths and could therefore divert existing contaminated groundwater discharge points. Groundwater modelling performed suggests aquifer flow directions in the area of the landfills should not change significantly under either the dry or flood scenarios, although post-construction monitoring would be advisable to verify this; and to measure any change to surface water features’ quality after construction is complete. Some of the other areas of groundwater contamination mentioned above are close to channel sections that will not have impermeable lining, consideration should be given to the measures that will be necessary to reduce the risk of significant amounts of contaminated groundwater entering the channel during the operational phase.

4.7.5  Recommendations

- Water quality monitoring should be completed in key areas to establish pre-construction baseline information. This information should then be used towards the start of the construction period to determine the construction phase monitoring and control/trigger levels required to identify significant change.
- The risks associated with the A423 embankment area should be reviewed once the proposed supplementary ground investigation for the culvert design in this area has been completed (expected in 2018).
• Scheme designers should incorporate the findings of this report into the final design for the Scheme; and Contractors should be made aware of the potential risks associated with ground contamination, so that they can factor it into their construction methods.

• Methodologies to prevent adverse effects associated with ground contamination should be implemented via the construction contractor’s Construction Environmental Management Plan.
Planning Policy Review

5.1 Introduction

This section sets out the planning policies relevant to the proposals for the OFAS and the justification for them in relation to these policies. The UK planning system has a hierarchy of policies and plans at both national and local level.

5.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF) sets out Government planning policies for England and how these are expected to be applied. It states that the purpose of the planning system is to contribute to the achievement of sustainable development and that a presumption in favour of sustainable development is at the heart of the NPPF. It sets out 12 core planning principles that underpin both plan-making and decision-taking, including that planning should:

- Be genuinely plan-led, and plans should be kept up-to-date;
- Always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;
- Support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change;
- Contribute to conserving and enhancing the natural environment; and
- Conserve heritage assets in a manner appropriate to their significance.

The provision of flood alleviation schemes is intrinsically linked to a number of these core principles. The NPPF states that “planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change…”

One of the core planning principles identified in paragraph 17 of the NPPF is to “take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it”. The proposed scheme has been designed taking account of the character of the area, and Green Belt designation.

The components of the NPPF considered to be of relevance to the proposed scheme are set out below:

Section 4 ‘Promoting Sustainable Transport’

Outlines that “all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment”.

There will be no transport impact from the proposals during operation. The scheme has been designed to minimise use of the local road network by vehicles during construction with the main accesses being the A34 via the A420 Botley Road/West Way, the South Hinksey junction to the A34, and the Old Abingdon Road/A4144 Abingdon Road. A transport assessment is appended to the ES, and as with other flood alleviation schemes of this nature, there will inevitably be some impact on the local road network during construction from vehicles travelling to and from the site, which has been assessed as part of the EIA. The ES also explains the access to the site for construction, maintenance and public access. An outline Construction Traffic Management Plan has also been prepared and is within the Transport Assessment (Appendix M of the Environmental Statement). This CTMP will be finalised upon selection of a nominated Contractor for construction of the Scheme.
in consultation with the Highway Authorities, and will form a central part of the traffic mitigation for the Scheme.

**Section 7 ‘Requiring Good Design’**
Recognises that good design is a key aspect of sustainable development.

Design of the proposed scheme has evolved since a strategy document was produced in 2010, which considered a list of over 100 options for a flood alleviation scheme. A shortlist of 14 options that focussed on conveyance improvement was developed through consultation and appraisal, and this was subsequently narrowed to one broad route, in the current location.

Paragraph 58 supports designs which reflect local surroundings and materials, while not preventing or discouraging appropriate innovation. Paragraph 60 supports ‘local distinctiveness’; the design of the scheme is fitting with the existing environment and follows what is currently in place.

A Green Infrastructure Study was developed to support the OFAS, which forms an integral part of the scheme development and fed into the Landscape Masterplan for the scheme. This study helped to aid good decision-making through the design process, with consideration of which spaces to protect (e.g. biodiversity, cultural heritage, amenity and landscape resources), how to strengthen and enhance them and how to link them up with new resources.

The new channel has been designed to retain, wherever possible, key environmental features (e.g. maintaining Oxford’s protected views, retaining the Jubilee Scrapes etc) and to create new wildlife habitats. Once the proposed scheme is operational, the objective is that it should have an overall benefit for ecology.

The new defences have been designed to be sympathetic to the local landscape character and blend with the local surroundings.

The Green Belt location of the scheme has also underpinned much of the design work that has taken place, with the aim to maintain its openness. Commentary on this is within the Green Belt Statement section of this document.

**Section 8 ‘Promoting Healthy Communities’**
This highlights the important contribution to the health and well-being of communities that results from access to high quality open spaces and opportunities for sport and recreation.

Access will be maintained either along current routes, or slightly diverted ones, providing opportunities for recreation and the positive health benefits derived from this.

**Section 9 ‘Protecting Green Belt land’**
This states that “the Government attaches great importance to Green Belt.” Within the NPPF, the fundamental aim of Green Belt policy is to “prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.”

Paragraph 80 states that the “Green Belt serves five purposes:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns merging into one another;
- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.”

The NPPF states “inappropriate development” is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances. When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to
the Green Belt. “Very special circumstances” will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

We have undertaken an appraisal of the scheme against Green Belt policy and this is contained within the Green Belt statement in Section 6 of this document. This details why our proposals are considered to be appropriate.

Section 10 ‘Meeting the Challenge of Climate Change, Flooding and Coastal Change’

This provides more detailed guidance with regard to meeting the challenge of climate change, flooding and coastal change. It states that local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change and water supply and demand considerations. Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere.

The frequency and impacts of flooding in Oxford will be reduced through the implementation of this scheme, whilst at the same time not increasing the risk of flooding elsewhere which has been a key consideration throughout the design of the scheme. The construction of a well-designed channel and other elements of the defences will provide a reduction in flood risk and ensure long term sustainability benefits for the local community, in accordance with the principles set out in the NPPF and Planning Practice Guidance (PPG). The scheme has been designed to meet these principles by including measures to maintain and enhance biodiversity, landscape and recreation.

Section 11 ‘Conserving and Enhancing the Natural Environment’

This seeks to protect and enhance natural landscapes, and improve biodiversity.

The nature conservation importance of the study area is reflected in the designation of international (e.g. Oxford Meadows Special Area of Conservation) and national conservation sites as well as local sites of wildlife value, some of which support nationally rare habitats (such as MG4a grassland communities; a National Vegetation Classification) and species including the protected Snakeshead fritillary and nationally scarce Creeping marshwort. The scheme and associated working areas are located within and adjacent to various Local Wildlife Sites, Sites of Local Importance for Nature Conservation (Oxford City) and Conservation Target Areas (e.g. Oxford Meadows and Farmoor, and Thames and Cherwell at Oxford), in addition to areas of high ecological value such as Hinksey Meadows and Kendall Copse.

We have therefore designed a fully integrated multi-beneficial scheme, which not only protects people and property from flooding but also protects and enhances biodiversity (delivering a net gain in habitats), enhances existing meadow landscapes and provides some new amenity features for the local community.

The scheme will create new and/or improved habitat for flora, fauna and fisheries, where it does not compromise flood defence or other environmental receptors. This habitat creation/restoration forms part of the integrated design of the Scheme to help mitigate habitat losses, to meet Water Framework Directive (WFD) measures and support England Biodiversity 2020 habitat creation targets e.g. new wetland habitat within the footprint of the second stage channel, new channel connecting the Bulstake and Hinksey Streams, in-channel habitat improvements including scrapes, ponds and backwaters. The wetland features in the second stage channel will incorporate a variety of profiles and gradients, to include marginal shelves, steep banks and undulating bed profiles to maximise wetland habitat diversity.

During the scheme design, we explored alternative alignments for the new second stage channel to minimise habitat loss, particularly in areas of sensitive biodiversity and landscape value. The channel, which has varying widths on either side was designed to maximise the retention of existing ecological habitat (particularly MG4a nationally rare grassland at Hinksey Meadow), vegetation and trees, to minimise other environmental impacts including visual intrusion, to maintain existing access, and to minimise impacts on public amenity and private land. For example, we aligned the second stage
channel to the north of Botley Road to avoid the loss of mature willow trees, which contribute to the landscape character of the area. At Hinksey Meadow, we moved the original route of the channel from the centre of the meadow to an alignment on the far western side of the meadow bordering Seacourt Stream, to minimise the loss of MG4a grassland. At the northern end of Hinksey Meadow, the alignment of the second stage channel was dictated by the need to avoid the electricity pylon and we re-routed the channel to avoid felling a row of tall poplars, which screen the pylon and the retail park. Additionally, modifications were made to the existing primary channel, with various new second stage channel widths and depths modelled. The final dimensions of the second stage were selected to be as narrow as possible to reduce the amount of MG4a meadow lost while still providing the necessary flood benefit and ensuring the land would still be viable for cattle grazing. Various other designs were identified to conserve the natural environment and are described in the Environmental Statement.

Our design sought to reduce the loss of mature trees and hedgerows as much as possible, and we will plant new trees and hedgerows as mitigation.

Section 12 ‘Conserving and Enhancing the Historic Environment’

Section 12 seeks to conserve heritage assets in a manner appropriate to their significance. Conservation is an active process of maintenance and managing change. Paragraph 128 of the NPPF confirms that, in determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

Paragraph 132 states that “When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset’s conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification.”

Paragraph 133 states that “Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:

• the nature of the heritage asset prevents all reasonable uses of the site; and
• no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
• conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible; and
• the harm or loss is outweighed by the benefit of bringing the site back into use.”

Paragraph 135 states “The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.”
We have carried out a suite of desk based assessments and extensive field investigations throughout the Scheme area during the design, to identify appropriate mitigation for implementation prior to and during the works, to help conserve the historic environment. The archaeological work has been undertaken in consultation with both Oxford City and County Archaeologists. This has ensured a robust assessment of the cultural heritage resource was undertaken of the area, which has informed the design, impact assessment and mitigation. In limited areas of the Scheme, where high value heritage assets have been identified and will be significantly affected. The most notable example being the Scheduled Old Abingdon Road culverts. Here we will carry out further targeted excavation works in accordance with comments from Historic England to preserve by record the nationally important yet non-Scheduled archaeological remains of the causeway that are impacted by the scheme. We will also enhance the setting of these scheduled culverts through the installation of information boards upon completion of the construction works.

The construction of the Scheme will change and partially remove some archaeological remains and historic structures and impact on the historic landscape. Additionally, some buried archaeology identified through extensive archaeological field investigations are vulnerable. Where possible, we have mitigated these impacts through sensitive design of the Scheme and have taken measures to ensure these areas are treated sensitively during construction.

The completed Scheme will provide a reduced flood risk to a variety of sites of historic interest including Listed Buildings within South Hinksey, Grandpont, New Hinksey and Abingdon Road, as well as Templeton College and Iffley Lock, Conservation Areas, Scheduled Monuments and other heritage assets.

The medieval causeway under Old Abingdon Road although not scheduled is considered to be a nationally important heritage asset therefore paragraph 139 of the NPPF applies. Historic England, in their letter dated 22 February 2017 stated that the channel route proposed would cause less than substantial harm, Paragraph 134 of the NPPF indicates that when this is the case the harm has to be weighed against the public benefits of the proposal. In this case the benefits are social, economic and environmental including but not limited to:

- reduced flood risk to over 1500 properties in Oxford
- provision of resilience and certainty to businesses in Oxford during times of flood
- creation of new and/or improved habitat for local wildlife
- preserving the Green Belt to the west of Oxford
- long term reduction in flood risk to transport infrastructure including Botley Road, Abingdon Road and the railway

Historic England also indicated that the setting of the Scheduled Ancient Monument has to be considered and the impact weighed against the public benefits. We have minimised the impact on the Monument and their setting, with the channel route avoiding the Scheduled culverts as far as possible without compromising the scheme design. The public benefits as set out above apply equally to the setting of the culverts.

Therefore, we believe the public benefits of the scheme outweigh the less than substantial harm to the heritage asset and any other conservation issues as these impacts will be mitigated.

Section 13 ‘Facilitating the Sustainable Use of Minerals’

This requires Local Authorities, when preparing Local Plans to define Minerals Safeguarding Areas and adopt appropriate policies in order that known locations of specific minerals resources of local and national importance are not needlessly sterilised by non-mineral development, whilst not creating a presumption that resources defined will be worked; and define Minerals Consultation Areas based on these Minerals Safeguarding Areas.
Ground investigations carried out showed that there are areas of river terrace deposits (gravels) within the scheme area. The site is not designated as a Mineral Strategic Resource Area or a Mineral Safeguarding Area in the Oxfordshire Minerals and Waste Local Plan 2017, which therefore indicates it is not of national or local importance. As part of our early scheme design we considered the issue of mineral extraction both in terms of winning the gravels in the area and sterilisation of minerals.

The scheme would not in itself sterilise the minerals remaining following the construction of the channel, however, any future proposals for the winning of minerals in this area would have to consider the technical functionality of the flood alleviation scheme as well as all the relevant planning policies.

If a gravel extraction operation were explored on the site, with or without the flood alleviation scheme, it would be small and constrained by utilities, the proximity of residential areas and would have access issues. Any proposal for mineral extraction would be contrary to policy as it is not designated as a safeguarding area but would also have to overcome these constraint issues. The likelihood of this area being progressed as a minerals operation is therefore very slim.

When undertaking initial design and feasibility work we investigated the potential to excavate large areas of the site in order to win the gravels, and to over excavate the channel itself to win gravels, followed by the filling of excavated areas with the alluvium. The feasibility of these options for over excavation of the gravels is summarised in the Materials Management Plan. The gravels are not needed as part of the development of the OFAS and we are not in the business of minerals excavation. Due to the technical difficulties, environmental impacts and costs we did not pursue the over excavation options any further. The gravels excavated in order to construct the channel are a by-product of the scheme.

The scheme as designed therefore meets the principles of the NPPF in relation to minerals as a resource.

5.3 Planning Practice Guidance (PPG)

Guidance and advice on how the risks associated with flooding can be taken into account in planning and the planning application process is provided in the Flood Risk and Coastal Change section of the Ministry for Housing, Communities and Local Government’s document, which was launched on 6 March 2014.

PPG reiterates NPPF requirements to protect people and property from flooding, including assessing flood risk by undertaking a Strategic FRA to inform Local Plan preparation and applying the ‘Sequential Test’ and, if necessary, the ‘Exception Test’ to steer development to areas where the risk of flooding, from all sources, is lowest and will not increase flood risk overall. Where appropriate to achieve sustainable development, PPG also supports the management and mitigation of flood risk. Further scheme-specific information relating to the assessment in relation to the Sequential Test and the Exception Test is included in the FRA that accompanies the Planning Application.

Other relevant topics for the proposed scheme include:

Design - This guidance provides advice on the key points to take into account on design.

Natural Environment - Explains key issues in implementing policy to protect biodiversity, including local requirements.

Conserving and Enhancing the Historic Environment - The guidance states ‘the conservation of heritage assets in a manner appropriate to their significance is a core planning principle. Heritage assets are an irreplaceable resource and effective conservation delivers wider social, cultural, economic and environmental benefits’. The guidance provides information for the identification and assessment of heritage assets.
Open space, sports and recreation facilities, public rights of way and local green space - Outlines that open space can provide health and recreation benefits to people living and working nearby; have an ecological value and contribute to green infrastructure.

The proposed scheme has been designed taking account of the requirements of the above-mentioned guidance, and appropriate mitigation will be provided as part of the works.

5.4 Development Plans

The Planning and Compulsory Purchase Act 2004 requires all Local Authorities to produce a Local Development Framework to make the planning system less complex, more accessible and efficient and, above all, one that actively engages the community and stakeholders in the plan making process.

Section 38(6) of the Planning and Compulsory Purchase Act 2004, requires applications to be determined in accordance with the approved development plan unless material considerations dictate otherwise. Oxfordshire County Council (County) is responsible for planning applications relating to minerals and waste and is also the Lead Local Flood Authority. The scheme is located within both Oxford City Council (City) and Vale of White Horse District Council jurisdictions and therefore relevant policy for all three authorities has been reviewed.

The pre-planning advice which we received confirmed the policies within the Development Plans that should apply to our proposals. We have made sure that all of these are covered in this appraisal. The relevant Development Plans comprise:

**Oxfordshire County Council:**

**Oxford City Council:**
- Oxford Core Strategy (2011);
- Saved policies of the Oxford Local Plan 2001-2016 (2006);
- Oxford City Council Sites and Housing Plan (February 2013);
- Oxford City Council Policies Map (2013);

**Vale of White Horse (VoWH):**
- Saved policies of the VoWH Local Plan (2011);
- Local Plan 2031 Part 2: Detailed Policies and Additional Sites - Publication Version (October 2017)

**Material Considerations**

**Oxfordshire:**
- Oxfordshire Local Flood Risk Management Strategy – Oxfordshire County Council;
- Oxfordshire County Council Minerals and Waste Level 1 Strategic Flood Risk Assessment (2015);
- Oxfordshire Local Transport plan 4 - Connecting Oxfordshire (2016) – Oxfordshire County Council;
Oxford:

Vale of White Horse:
- VoWH SFRA Level 1 update (October 2017);
- North Hinksey Parish Neighbourhood Plan (draft October 2017)

Other:

5.4.1 Oxfordshire Minerals and Waste Core Strategy – adopted September 2017

The County Council is responsible for minerals and waste planning in Oxfordshire. The new Oxfordshire Minerals and Waste Local Plan will comprise: Part 1 – Core Strategy, which was adopted in September 2017; and Part 2 – Site Allocations which is yet to be prepared.

The Minerals and Waste Local Plan: Part 1 – Core Strategy (referred to as ‘the Core Strategy’) provides the planning strategies and policies for the development that will be needed for the supply of minerals and management of waste in Oxfordshire over the period to the end of 2031. The policies in the now adopted Core Strategy replace policies in the Oxfordshire Minerals and Waste Local Plan (1996).

M2 Provision for working aggregate materials

This policy identifies the requirements for minerals landbanks. We will not be affecting the provision of this, and our site is not included within identified provisions.

We have explored the opportunities for sand and gravel extraction as part of the scheme but this was discounted following a more detailed assessment on the volume of gravels that could be extracted and the constraints of the site, and the technical feasibility and viability of the options. This is explained in more detail in the Materials Management Plan.

M3 Principal locations for working aggregate minerals

This identifies the strategic resource areas within which it is proposed that future working for sharp sand and gravel, soft sand and crushed rock should take place.

The site is not designated as a Mineral Strategic Resource Area or a Mineral Safeguarding Area in the Oxfordshire Minerals and Waste Local Plan 2017, which therefore indicates it is not of national or local importance. As part of our early scheme design we considered the issue of mineral extraction both in terms of winning the gravels in the area and sterilisation of minerals. Commentary relating to minerals is included as part of our commentary on Section 13 of the NPPF.

Paragraph 4.32 makes reference to the OFAS. Paragraph 4.31 outlines that within southern Oxfordshire, it is likely that any significant requirement for additional sites will need to be met by a new working area within the Thames and Lower Thame Valleys area from Oxford to Cholsey.
Paragraph 4.32 states that “Some of the requirement may be met by sharp sand and gravel extracted in the construction of the proposed new flood relief channel (from Botley to Sandford on Thames) for the Oxford Flood Alleviation Scheme. The Environment Agency have estimated this could involve the extraction of approximately 500,000 cubic metres of sand and gravel (approximately 0.75 million tonnes). This proposal is still in preparation and a scheme has not yet been approved, designed or had planning permission granted. The earliest that approval will be given for a scheme to go ahead is spring 2018”.

Since the Core Strategy was published, we have greater detail about the amounts of sand and gravel which will be removed during the excavation of the two-stage channel, informed by detailed ground investigations. Material extracted will be reused both on and off site. Full details relating to this are contained within the Materials Management Plan.

M5 Working of aggregate minerals

This relates to permission to work aggregate minerals. As part of our proposals we are not applying to work aggregate minerals, although there will be minerals present in material extracted. Full commentary relating to this is within the Materials Management Plan and elsewhere within this document.

M10 Restoration of Minerals Working

It requires that mineral workings be restored to a high standard and in a timely and phased manner to an after-use that is appropriate to the location and delivers a net gain in biodiversity.

Although we are not proposing mineral working as part of our proposals, our site will be restored once works are complete. The site will primarily remain in its current use, aside from when it will be needed for flood storage. Details of maintenance post construction are set out in section 3 of this document and in the Environmental Statement. A Landscape and Habitat Management Plan is submitted in support of the planning application in the ES.

W3 Waste

Chapter 5 of the Minerals and Waste Core Strategy outlines the proposed waste planning strategy. It outlines that the Council wants to promote and enable the movement of waste up the waste management hierarchy, away from landfill and towards increased re-use, recycling, composting and recovery of resources from waste.

Our proposals conform to this policy. Surplus material excavated during the construction of the scheme will be used on site as far as possible in the creation of flood bunds (excavated alluvium). Gravel will be used for environmental mitigation and improvements for creating riffles and gravel beds in new and existing channels. Where relevant planning permission and environmental permits are in place, material will be used in restoration schemes located off site. This is covered in detail in the Materials Management Plan.

W6 Landfill and other permanent deposits of waste to land

Relates to the provision of landfill and other permanent deposits of waste which includes for disposal of Oxfordshire’s non-hazardous waste, which will be made at existing non-hazardous landfill facilities.

Our proposals will be reusing and recycling material on site where we can, and inert material will be taken to active or unrestored quarries as per policy. Extracted material will be dealt with appropriately. The only material going to landfill is that from historic landfill sites. Everything else will be used on other schemes or put to other uses. A complete Materials Management Plan is submitted with this application which documents the decision-making process for the proposals for dealing with the excavated material, whether it is re-used on site or removed for other purposes, as well as identifying the safest and most cost-efficient method of excavation.

W11 Safeguarded waste
This states that the Site Allocations will identify sites that will be safeguarded for waste management use for the duration of their planning permission. The Redbridge site which is safeguarded is close to the proposals but we will not be impacting upon it.

**C1 Sustainable Development**

This policy requires that a positive approach will be taken to minerals and waste development in Oxfordshire, reflecting the presumption in favour of sustainable development contained in the NPPF and the aim to improve economic, social and environmental conditions of the area. Our proposals are designed to meet the principles of sustainable development and have complied as far as possible with all policies in the Plan, while still being fit for purpose.

**C2 Climate change**

Requires proposals for minerals or waste development, including restoration proposals, should take account of climate change for the lifetime of the development from construction through operation and decommissioning. Our proposals specifically take into account climate change in their design as set out in the accompanying FRA.

To account for projected climate change, relative to present day (2016) the 100-year inflows have been increased by 35%. The 100-year (1%) + 35% climate change flows have been used to inform freeboard allowances for the proposed development (defence levels). The approach follows the EA Flood risk assessments climate change allowances guidance note.

**C3 Flooding**

Requires minerals and waste development to where possible, take place in areas with the lowest probability of flooding. Where development takes place in an area of identified flood risk this should only be where alternative locations in areas of lower flood risk have been explored and discounted (using the Sequential Test and Exceptions Test as necessary) and where a flood risk assessment is able to demonstrate that the risk of flooding is not increased from any source. Our proposals comply with this policy as it is specifically in place in order to reduce flood risk and prevent flooding. The Sequential Test has been considered within the FRA.

**C4 Water**

States that “Proposals for minerals and waste development will need to demonstrate that there would be no unacceptable adverse impact on or risk to:

- The quantity or quality of surface or groundwater resources required for habitats, wildlife and human activities;
- The quantity or quality of water obtained through abstraction unless acceptable provision can be made;
- The flow of groundwater at or in the vicinity of the site; and
- Waterlogged archaeological remains.

Proposals for minerals and waste development should ensure that the River Thames and other watercourses and canals of significant landscape, nature conservation, or amenity value are adequately protected from unacceptable adverse impacts.”

Significant modelling and assessments have been undertaken specifically dealing with groundwater, and are included in our application submission. Any impacts that the scheme will have will be mitigated as far as possible with significant mitigation proposed as part of this scheme. Our proposals fully reflect the requirements of the policy which have been considered in great detail as set out in the ES and FRA. There are no groundwater impacts outside of the scheme area or on the Oxford Meadow SAC or Iffley Meadows and Hinksey Meadow during flood events as a result of our proposals.
C5 Local Environment, amenity and economy

Requires that proposals for minerals and waste development shall demonstrate that they will not have an unacceptable adverse impact on:

- the local environment;
- human health and safety;
- residential amenity and other sensitive receptors; and
- the local economy.

Our proposals will have a positive impact on all of these issues once operational through a reduction in flood risk, notwithstanding the other elements of our proposals such as upgrades to existing footpaths. There will be some negative impacts but these will be mitigated as far as possible through various means as will be set out in the contractor’s Construction Environmental Management Plan (CEMP).

C6 Agricultural Land and soils

Requires that proposals for minerals and waste development shall demonstrate that they take into account the presence of any best and most versatile agricultural land. Significant development leading to the permanent loss of best and most versatile agricultural land will only be permitted where it can be shown that there is a need for the development which cannot reasonably be met using lower grade land and where all options for reinstatement without loss of quality have been considered taking into account other relevant considerations.

We have worked closely with landowners to ensure that reinstatement of land is undertaken as part of the works. A Soil Resource Survey was undertaken by Land Research Associates (2018) to inform the design and appraisal of the Scheme, and to provide information on the soils and agricultural quality of land affected by the Oxford Flood Attenuation Scheme.

The scheme area is mainly located on floodplain and has heavy soils with poor drainage. The soils are classified as subgrade 3b agricultural quality land, which is limited by wetness and flood risk. The Scheme will therefore not affect the ‘best and most versatile’ agricultural land as set out by this policy.

C7 Biodiversity and Geodiversity

The general thrust of this policy is that minerals and waste development should conserve and, where possible, deliver a net gain in biodiversity.

This is considered in chapter 8 ‘Flora and fauna’ of the ES in significant detail. We have designed a Scheme that will create new and improved areas for flora, fauna and fisheries, where it does not compromise flood defence or other environmental receptors. This habitat creation/restoration forms part of the integrated design of the Scheme to help mitigate habitat losses, to meet Water Framework Directive measures and support England Biodiversity 2020 habitat creation targets e.g. new wetland habitat within the footprint of the second stage channel, new channel connecting the Bulstake and Hinksey Streams, in-channel habitat improvements including scrapes, ponds and backwaters. The wetland features in the second stage channel will incorporate a variety of profiles and gradients, to include marginal shelves, steep banks and undulating bed profiles to maximise wetland habitat diversity. Additionally, the removal of Towles Mill, in conjunction with a separate scheme at the upstream end of the Seacourt Stream, will facilitate fish passage around Oxford for the first time in over a century.

Although the scheme will result in significant habitat loss during construction including a considerable number of trees, lowland meadow at Hinksey Meadows, wet woodland and eutrophic standing waters at Kennington Pond LWS, the completed scheme will deliver an overall net gain in biodiversity.
C8 Landscape and Historic Environment

Proposals for minerals and waste development shall demonstrate that they respect and where possible enhance local landscape character, and are informed by landscape character assessment. Proposals shall include adequate and appropriate measures to mitigate adverse impacts on landscape, including careful siting, design and landscaping. Where significant adverse impacts cannot be avoided or adequately mitigated, compensatory environmental enhancements shall be made to offset the residual landscape and visual impacts.

A landscape and Visual Impact Assessment (including landscape character assessment) has been undertaken as part of the EIA for the scheme, based on the principles set out in the Guidelines for Landscape and Visual Assessment (GLVIA3) (Landscape Institute and Institute of Environmental Management Assessment (IEMA) (2013) and guidance from Natural England on landscape character assessment (2014).

Changes to the local landscape and visual amenity will be inevitable during construction due to the loss of vegetation and mature trees in the footprint of the Scheme, the temporary presence of plant, construction compounds and vehicular movements, and the earthworks and excavations required to construct the Scheme.

There will be a reduction in visual amenity for recreational users and changes to landscape character of Seacourt Nature Park, Botley Meadow, Willow Walk and Devil’s backbone public rights of way, Kendall Copse and Kennington Pond LWS upon Scheme completion and up to three years following completion of the Scheme due to loss of mature trees, new channels and/or new structures. After 15 years from Scheme completion, there will only be significant impacts on visual amenity and landscape character at Kendall Copse due to the new structures (culverts/bridges) and new channel. However, at this time, the vegetation within the copse will be reaching semi-maturity, helping to integrate the new bridges and channel into the semi-urban landscape.

We have sensitively designed the Scheme to minimise impacts on landscape features of high value such as mature trees and MG4a grassland. We will create new woodland, wetland meadow and grassland areas to replace those lost during construction and to enhance the landscape character in areas where the landscape is less valued, as shown on the Landscape Planting Plans. Wherever possible, existing vegetation within the boundary of the Scheme will be retained to integrate the proposals with the surrounding landscape. In the long-term, the landscape and ecological design of the new channel will aim to enhance the experience of walking, cycling, riding or boating in the area by making the landscape more attractive.

C8 goes on to require great weight will be given to conserving the landscape and scenic beauty of Areas of Outstanding Natural Beauty (AONB) and high priority will be given to the enhancement of their natural beauty. Our site is not within an AONB so this does not apply.

C9 Historic Environment and Archaeology

States that “proposals for minerals and waste development will not be permitted unless it is demonstrated, including where necessary through prior investigation, that they or associated activities will not have an unacceptable adverse impact on the historic environment.”

Previous comments in relation to Archaeology and the Historic Environment have been made in relation to policy C8. A full appraisal of the impacts and mitigation is set out in the accompanying ES.

C10 Transport

Policy C10 states that “Minerals and waste development will be expected to make provision for safe and suitable access to the advisory lorry routes shown on the Oxfordshire Lorry Route Maps in ways that maintain and, if possible, lead to improvements in:

- the safety of all road users including pedestrians;
- the efficiency and quality of the road network; and
• **residential and environmental amenity, including air quality.**

Traffic impacts of the scheme have been appraised in a Traffic Assessment, which is appended to the ES. We will manage transport disruption and increased traffic flows during construction of the Scheme through measures described in an outline Construction Traffic Management Plan (CTMP), which will be finalised in consultation with the Highway Authorities. This CTMP will make provision for the safe and suitable access routes for construction traffic.

**C11 Rights of Way**

This policy seeks to maintain the integrity and amenity value of the rights of way network and if possible retain it in situ in a safe and useable condition. Diversions should be safe, attractive and convenient and, if temporary, shall be reinstated as soon as possible.

Our proposals do this in that existing rights of way will be in line with modern design standards aside from at Westway Cycle Bridge we have agreed in principle with the County Council to use existing standards due to onsite constraints.

Any diversions required will be agreed prior to their implementation in the Construction and Environmental Management Plan. Public Rights of Way (PRoW) will be reinstated as soon as possible. Full details relating to access are contained within the ES.

The temporary and permanent diversions of PRoW (and alterations to other access routes) are described in the ES.

**Policy C12 Green Belt**

This states that “Proposals that constitute inappropriate development in the Green Belt, will not be permitted except in very special circumstances. ‘Very special circumstances’ will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

Conditions may be imposed on any permission granted to ensure that the development only serves to meet a need that comprises or forms an ‘other consideration’ in the Green Belt balance leading to the demonstration of very special circumstances.”

The justification for our proposals in the Green Belt is set out in the Green Belt Statement in Section 6 of this document.

**5.4.2 Oxford Core Strategy**

The Core Strategy is the principal document in Oxford’s Local Development Framework (LDF). It sets out the scale and general location of future development, and policies to deliver the Core Strategy vision and objectives for the next 20 years. The Core Strategy forms the starting point for determining planning applications within Oxford City.

Paragraph 3.3.23 is pertinent to our proposals and states that “Most of the Green Belt land within Oxford’s boundary also has some protection because it is part of the river corridors of the Thames and Cherwell, or is designated for its nature-conservation value. Protection of the Green Belt therefore helps to retain the distinctive physical form of the city, where the river corridors running either side of Oxford’s historic core are an essential part of its special character and landscape setting. Such land is generally unsuitable for development”.

Our proposals need to be located within this designated Green Belt area. The nature of the design of the scheme however is that once development is complete, the impact on the landscape will be negligible, and will not impact on the openness of the Green Belt. The design of the scheme is appropriate for its location. A Green Belt Statement is included within this document.
The Oxford Core Strategy includes a number of policies relevant to the proposed scheme, including:

**Policy CS4 Green Belt**

This states that “The general extent of the Green Belt inside Oxford’s boundaries will be maintained. Within the Green Belt, planning permission will not be granted for inappropriate development, in accordance with national policy”.

An appraisal of the scheme against national policy has been explored in the Green Belt Statement in Section 6 of this document, detailing why the scheme is justified in Oxford’s Green Belt.

**Policy CS9 Energy and natural resources**

States that “Proposals for development are expected to demonstrate how sustainable design and construction methods will be incorporated... In particular, planning permission will only be granted for developments on qualifying sites that demonstrate, through submitting a Natural Resource Impact Analysis checklist, how they will:

- minimise the use of energy by using energy-efficiency solutions and technologies;
- deliver a proportion of renewable or low-carbon energy on site;
- incorporate recycled or reclaimed materials; and
- minimise water consumption by incorporating appropriate design and technologies, in accordance with the Natural Resource Impact Analysis Supplementary Planning Document...”

The construction of a new channel will produce approximately 364,128\(^3\) of excavated materials, some of which will require removal from the floodplain, with associated emissions from vehicles. Surplus material excavated during the construction of the scheme will be used on site as far as possible, with careful consideration to not raise land to levels that would compromise the floodplain or local landscape character. Excavated gravel will be used for environmental mitigation and improvements for creating riffles and gravel beds in new and existing channels.

Disposal to landfill is considered to be a last resort for all inert materials. The modest volume of sands and gravels resulting from the excavation of the scheme will be reused as far as possible on site as part of the scheme. This will include the creation of a gravel bed and riffles in both new and existing watercourses to improve the biodiversity of the river system. Gravels will also be utilised in filter drains to new embankments and for mixing with other materials arising on the site, such as alluvium, to create a suitable material for use as engineering fill to the proposed flood defence embankments. Any surplus gravels will be taken off-site and used in other Environment Agency projects in the local area. Surplus inert materials will be re-used on other schemes in the Oxford area. Investigations have indicated that the most likely schemes which will be active during the construction period are likely to be gravel quarry restoration schemes as outlined in the Materials Management Plan.

We will ensure that our contractor uses well-maintained equipment and implements construction procedures that minimise vehicle emissions and ensures the sustainable use and disposal of materials. We have incorporated environmentally sustainable techniques and materials (e.g. sustainable timber for use in new bridges) into the design of the Scheme.

**Policy CS10 Waste and recycling**

States that “All new developments will be expected to have regard to the waste management hierarchy during design, construction and final occupation.”

As detailed above, in response to Policy CS9, the design of the scheme has set out to maximise the re-use of existing materials on site and find appropriate sites to locate waste materials as close as possible to the site for restoration and environmental improvements as far as possible.
Policy CS11 Flooding

Paragraph 4.3.2 states “Significant areas of Oxford are at risk of flooding. Large parts of the built-up areas in South Oxford, West Oxford and Lower Wolvercote currently have a 1% or greater annual risk of flooding (Zone 3). In addition, large parts of the undeveloped floodplains of the Thames and Cherwell regularly flood”.

The proposed scheme is designated as Flood Zone 3 as shown on the Environment Agency’s Flood Maps for Planning. Policy CS11 states that “For all developments... in any area of flood risk from rivers (Flood Zone 2 or above) or other sources developers must carry out a full Flood Risk Assessment (FRA), which includes information to show how the proposed development will not increase flood risk. Necessary mitigation measures must be implemented”.

The proposed scheme will reduce flooding events from the main channel of the River Thames and from the Hinksey and Bulstake Streams, reducing risk to around 1,500 properties. Floods in this part of Oxford also cause transport disruption, with frequent closure of the A420 Botley Road, Abingdon Road and the railway. Our proposals will reduce flood risk to this infrastructure.

The FRA accompanying this planning application illustrates that the scheme does not result in increased flood risk elsewhere. The FRA addresses measures to prevent flood risk within Oxford from being elevated during the construction period.

Policy CS12 Biodiversity

States that “Development will not be permitted that results in a net loss of sites and species of ecological value. Where there is opportunity, development will be expected to enhance Oxford’s biodiversity”.

Paragraph 4.4.1 states that “In the case of locally protected sites, development that would have a significant adverse impact would only be permitted in exceptional circumstances, and only if it is possible to compensate for the damage caused”.

Paragraph 4.4.3 states that “The Conservation Target Areas project identifies areas of significance at county level as areas where conservation action will have the greatest benefit. It is important to restore and manage these habitats to restore the biodiversity and landscape interest. The floodplain meadows of the Thames and Cherwell have been identified as conservation target areas...”

The scheme and associated working areas will be located within and adjacent to various Local Wildlife Sites, Sites of Local Importance for Nature Conservation (Oxford City) and Conservation Target Areas (e.g. Oxford Meadows and Farmoor, and Thames and Cherwell at Oxford), in addition to areas of high ecological value such as Hinksey Meadows and Kendall Copse.

We have therefore designed the new channel to consider these areas and ensure that we minimise habitat loss and deliver new valuable river and wetland habitat, with a series of wetland features including backwaters and scrapes. Where the new channel runs through an important MG4a grassland community at Hinksey Meadows, we sought alternative designs to minimize impacts and maximise the retention of existing habitat. For example, we moved the original route of the channel from the centre of the meadow to an alignment on the far western side of the meadow bordering Seacourt Stream, to minimise the loss of MG4a grassland. At the southern end of Hinksey Meadow, the alignment of the second stage channel was dictated by the need to avoid the electricity pylon and we re-routed the channel to avoid felling a row of tall poplars, which screen the pylon and the retail park. Additionally, modifications were made to the existing primary channel, with various new second stage channel widths and depths modelled. The final dimensions of the second stage were selected to be as narrow as possible to reduce the amount of MG4a meadow lost while still providing the necessary flood benefit and ensuring the land would still be viable for cattle grazing.

The detailed design of the scheme will protect as far as possible and mitigate impacts on existing biodiversity including protected species, and the scheme will deliver no net loss of habitat. We
propose appropriate new local wetland habitats are created as part of the two stage channel, which will incorporate a variety of profiles and gradients, to maximise wetland habitat diversity, protecting and enhancing the overall landscape characteristics of this part of the Green Belt and functional floodplain.

Further detail of the impacts, mitigation measures and ecological improvements are outlined in the ES.

Policy CS13 Supporting access to new development

Paragraph 5.1.2 of the Core Strategy chapter ‘Transport and Accessibility’ states that “All future development will be planned to ensure excellent opportunities for walking, cycling and public transport”.

Policy CS13 indicates that “Planning permission will only be granted for development that prioritises access by walking, cycling and public transport.”

The scheme by its very nature (i.e. flood alleviation scheme) is not a development to which new public access routes will need to be planned.

The Scheme will however provide a long-term reduction in the risk of flooding to many recreational assets (including walking, cycling and public transport routes) in Oxford. There will be improvements to some of the new bridges in the Scheme area with enhanced surfaces, fencing, railings and signage, which will benefit those using the affected public rights of way (e.g. at Willow Walk bridleway and North Hinksey Causeway footpath). We have also re-designed the railings on Devil’s Backbone bridge, to provide an opportunity for the path to be upgraded to a cycleway in the future.

Some temporary and/or permanent closures of a bridleway, footpaths and cycleways as set out in the paragraph above will be required, resulting in increased walking/cycling distances along alternative public rights of way or to alternative bus-stops during temporary closure of Old Abingdon Road (and bus route 35). These will be minimised as far as possible. There will also be some traffic on existing pedestrian, cyclist and equestrian routes that will be managed.

Measures to minimise disruption for those walking, cycling, and horse riding have been identified in the ES and we will continue to consult those affected during construction of the Scheme.

Policy CS18 Urban design, townscape character and the historic environment

States that “Views of the skyline of the historic centre will be protected”.

The proposed scheme has taken into account key views including the ‘Oxford View Cones’ across the City to/from the surrounding areas. The three View Cones, which have views across the OFAS study area are named ‘Views from the Western Hills - Raleigh Park, Boars Hill and the A34 Interchange at Hinksey Hill’. All of these viewpoints look directly over the study area, and therefore the scheme design has considered any potential changes in the view, as well as looking at the characteristics of the existing view including detractors, and potential opportunities for enhancements through the removal or screening of intrusive features.

Where trees and vegetation will be removed as part of the Scheme, we have identified mitigatory planting areas that will not impact upon these key views, in agreement with the affected landowners. We have also identified mitigation for the scheme that involves the appropriate positioning of temporary structures, such as lighting columns and signage associated with compounds and construction activities to minimise effects on skylines and vistas.

Policy CS21 Green spaces, leisure and sport

Paragraphs 6.4.2 and 6.4.3 state that “There is currently an average of 5.75 hectares of publicly accessible green space per 1,000 people across Oxford, and it is desirable that this be maintained. This does not necessarily mean that the standard of 5.75 ha should be applied as a requirement within all new developments, as small new developments would not be able to provide usable public green space on site. It is important that the right types of public green space are provided in the right locations.”
Whilst the standard cannot be applied directly to all new developments, it is important that new development does not make the balance worse.”

Policy CS21 goes on to state that “The City Council will seek to maintain an overall average of 5.75 ha of publicly accessible green space per 1,000 population.”

Significant protection will be provided to Osney Mead Industrial Estate in the form of a secondary defence whilst not impacting on the recreation ground. This involves the creation of a grass bund crossing the eastern part of Oatlands Road Recreation Ground to the west of Osney Mead. The bund provides significant protection to the designated employment area and has been designed in order to avoid loss of space and be incorporated into the recreation ground.

Post construction there will be a permanent loss of public access land comprising a loss of 1.6ha at Seacourt Nature Park 1.4ha at Kendall Copse and 0.28ha at Kennington Pond. There will also be a permanent loss of 0.3ha of level open space at Oatlands Recreation Ground in the footprint of the proposed bund, but the new sloping area can continue to be used by the public.

Policy CS28 Employment sites

Paragraph 8.1.12 of the Core Strategy states that “Retaining employment sites for employment-generating uses serves to reduce commuting to work, as well as improving access to local jobs for different sectors of the community. It is important to protect both larger and smaller sites to encourage opportunities for a diverse range of different businesses”.

Policy CS 28 goes on to state that “Planning permission will not be granted for development that results in the loss of key protected employment sites”. It then further states ‘Planning permission will only be granted for the modernisation and regeneration of any employment site if it can be demonstrated that new development:

- secures or creates employment important to Oxford’s local workforce; and
- allows for higher-density development that seeks to make the best and most efficient use of land; and
- does not cause unacceptable environmental intrusion or nuisance.”

It has been identified that to sufficiently protect the Osney Mead industrial area there is a requirement to remove one building that is in a state of disrepair on the southern edge of the Osney Mead Industrial Estate. The Osney Mead industrial area is designated as a Protected Key Employment Site and the inclusion of the flood defences within this area will help to improve the resilience of this employment area. The loss of one building is seen as key to maintain the integrity of the rest of the area.

In the absence of the Scheme, there will be a continued risk of flooding to local businesses, tourism and the local community in Oxford, which will increase due to the effects of climate change. These effects will be exacerbated by urban development associated with the increasing population and in-commuting to the city. This will include increased flood risk for approximately 3,400 residential and commercial properties, and tourist and recreational assets over the next 100 years, while the flood risk to new development identified in the Core Strategy will remain unmanaged.

5.4.3 Saved policies of the Oxford Local Plan 2001-2016

This Local Plan set out the policies and proposals for development and land use in Oxford for the period 2001 to 2016. Some policies within the Oxford Local Plan 2001-2016 have been superseded by Core Strategy policies but many are ‘saved’ pending the adoption of future Development Plan Documents (DPDs).
The Oxford Local Plan includes a number of policies relevant to the proposed scheme, including:

**Policy CP1 Development Proposals**

Policy CP1 will be applied to all development and states “Planning permission will only be granted for development which:

a. shows a high standard of design, including landscape treatment, that respects the character and appearance of the area; and

b. uses materials of a quality appropriate to the nature of the development, the site and its surroundings; and

c. is acceptable in respect of access, parking, highway safety, traffic generation, pedestrian and cycle movements including, where appropriate, links to adjoining land; and

d. provides buildings and spaces with suitable access arrangements and facilities for use by all members of the community with special access needs.

Where relevant, development proposals must also:

e. retain and protect important landscape and ecological features, and provide for further landscape treatment where appropriate to the nature of the area or to safeguard the local amenity; and

f. retain important open spaces of recreational or amenity value or both; and preserve or enhance the special character and setting of listed buildings and conservation areas; and preserve the site and setting of Scheduled Ancient Monuments or sites of special local archaeological significance; and

g. safeguard public rights of way and the amenities of adjoining land users and occupiers, including the provision of alternative rights of way of equal or enhanced quality.”

Our proposals fully comply with all relevant elements of this policy by:

- Keeping design at the forefront of the scheme along with the operational requirements of the defences. The site is sensitive given its location in the Green Belt and against the backdrop of Oxford and this is reflected in the proposals and mitigation as shown on the Landscape Plans.

- The materials used will be sympathetic to the surroundings and once constructed the scheme is intended to blend into the existing landscape. Some of the surplus materials will be re-used on site for flood bunds and gravel in new and existing channels as part of environmental mitigation.

- Parking, access, highway safety and transportation issues will be of less relevance once the scheme is operational. During construction, all of these issues will be reflected in our approach to the development. All existing public access routes in the scheme area will remain following the completion of the works.

- Ecology and landscape have been important considerations in our proposals, with landscaping (including tree planting) shown on the accompanying plans. An Arboricultural Survey has been undertaken to inform the scheme design and to highlight trees of important landscape value that should be retained and protected, where possible. The ES includes a thorough ecological impact assessment, and Landscape and Visual Impact Assessment, including mitigation where appropriate.

- The scheme has been designed to avoid the loss of open recreational space (e.g. the alignment of the proposed earth embankment at Osney Mead runs along the eastern edge of the Oatlands Recreation Ground), in line with our comments in relation to Policy CS21 of the Oxford Core Strategy.
• An assessment of impacts on the historic environment is contained within the ES, to assess the impact of our proposals on archaeology and cultural heritage. Particular consideration is being given to the protection of the culverts at OAR, and their setting, which have been avoided in the design.

Policy CP11 Landscape Design
States that “Planning permission will only be granted where...:

a. the landscape design relates to the function and character of the spaces and surrounding buildings;

b. existing trees, shrubs, hedges and water features of significant landscape value are incorporated alongside new planting;

c. buildings and paved surfaces are located far enough from existing trees and hedges to avoid damage to roots from sub-surface works;

d. all boundary edges or fences are designed as an integral part of the development and surrounding area;

e. paving and location of street furniture are designed to make walking and cycling easy, improve pedestrian safety, give an uncluttered appearance, and make use of good quality materials to enhance their setting; and

f. the landscape design enhances ecological value, wherever possible.”

The proposed scheme will pass through Green Belt and Oxford View Cones. The scheme design is sensitive to these designations through the use of locally appropriate hard and soft landscape works as shown on the landscape plans and careful consideration of the aesthetic appearance of flood defences in sensitive areas, maintaining its openness. Impacts on View Cones and other mitigation is shown on the Landscape Masterplan, which has been produced and submitted as part of the application.

Our landscape design of the scheme fully complies with this policy by:

• Keeping the landscape design at the forefront of the scheme along with the operational requirements of the defences. The site is sensitive given its location in the Green Belt, adjacent to open spaces and against the backdrop of Oxford and this is reflected in the proposals and mitigation as shown on the Landscape Plans

• Retaining mature trees, tree groups deemed to be significant in the local landscape, visually prominent tree specimens, mature hedgerows and existing water features as much as possible in the scheme design

• Replanting new trees and hedgerows to offset any losses, while recognising that it will take many years before new trees will replace the habitat value of mature trees. As a matter of Environment Agency policy, all planted trees will be native species of local provenance rather than non-native ornamental species

• Protecting trees to be retained through tree protection barriers to avoid root damage from the construction works

• Our scheme reflects an integrated landscape and ecological design that seeks to deliver improved habitat and an enhanced landscape. The habitat within the newly created channel is likely to vary over time as natural succession takes place, and such dynamic changes are considered likely to be beneficial as they enrich and reflect natural cyclical aspects of the landscape.
Policy CP13 Accessibility
This policy states that “Planning permission will only be granted for development which makes reasonable provision for access by all members of the community...”

All existing public access routes in the scheme area will remain or be diverted slightly following completion of the works and as far as reasonably practicable, suitable alternative arrangements will be provided for pedestrians, cyclists and horses during the construction process.

Policy TR4 Pedestrian and Cycle Facilities
This states that “The City Council will only grant planning permission for development that:

a) provides good access and facilities for pedestrians and cyclists...”

All existing public access routes in the scheme area will remain following completion of the works. Permanent diversions to public access routes include the existing footpath from OAR to South Hinksey which will be diverted along the edge of the second stage of the new channel, the footpath running through Seacourt Nature Reserve will be slightly altered to account for the route of the second stage channel and the access through Oatlands Recreation Ground and past Osney Mead Industrial Estate will be altered to account for embankments and flood walls. Notable temporary arrangements for public access during construction include a temporary footpath diversion which will be used on Willow Walk to maintain public access during the works.

Policy TR9 Park and Ride
The proposed scheme is in the vicinity of two park and ride sites; Redbridge to the south and Seacourt to the north. Policy TR9 states that “Parking provision at the Peartree, Redbridge and Seacourt park and ride car parks will be protected for park and ride purposes, including additional capacity.”

The proposed scheme takes into account the impact on Seacourt Park and Ride. Within the existing car park we include some raised curbs to increase the protection within the park and ride. The scheme design also reflects the recent planning consent granted to expand the park and ride. Further commentary on this is provided in the Planning History section of this document. We also anticipate that part of Redbridge Park and Ride with be effected temporarily. We have indicated within our temporary construction drawings that a compound will be required on the southern part of the existing car park, allowing for the storage of material and plant for the construction of the A423 culverts and other interventions further south along the Hinksey Stream. During the construction period, disruption to the operational area of the park and ride and the surrounding area will be kept to a minimum.

Policy NE20 Wildlife Corridors
States that “Planning permission will not be granted for developments that would sever or harm the viability of wildlife corridors unless it is possible to create an equivalent corridor of equal or greater ecological value which can be secured as part of the proposal.”

We have designed a new wildlife corridor that delivers river and wetland habitat as an integral part of the scheme design, through the creation of a two-stage channel, with a series of wetland features including backwaters, ponds and scrapes, and associated planting. The channel will incorporate a variety of profiles and gradients, to include an undulating or stepped bed profile where possible, to maximise wetland habitat diversity. Whilst our design will impact on the existing watercourses and flow-dependent habitat, some of the watercourses are of low ecological value in many locations, as some sections have been artificially widened in the past. In such areas, the watercourses will benefit from measures to narrow the main channel while allowing flood flows to use a second-stage channel.

The scheme has always been designed so that once operational it is ecologically beneficial so that the value of the new channel and the newly-created river and wetland habitats outweigh the loss of terrestrial habitat. As well as the ecologically beneficial channel to offset impacts on the existing watercourses, we are also changing the character of the severed sections of the Bulstake and Hinksey Stream into backwaters, which will be valuable features in the new arrangement of
channels, and we will re-naturalise the river habitats where possible. The overall impact will be positive with suitable enhancements to the backwaters, the creation of backwaters and scrapes related to the new channel, and with the encouragement of in-channel vegetation.

Policy NE21 Species Protection

This states that “Planning permission will not be granted for developments that would harm plant and animal species specially protected by law unless the harm can be overcome by appropriate mitigation through compliance with planning conditions or planning obligations.”

A wide range of ecological surveys (including protected species and invasive species) have been undertaken to better understand the impacts of the scheme on plant and animal species. Using the results of the surveys, the scheme has been designed to avoid and/or minimize disturbance to protected species including badgers, bats, reptiles, dormice, water voles, otters and breeding birds as well as impacts on critical plant species such as Creeping marshwort, Snakeshead fritillary and Whorled water-milfoil. However, where impacts on protected species are unavoidable, appropriate mitigation strategies have been developed in compliance with relevant legislation. Pre construction species surveys are also planned in appropriate seasons.

A full ecological impact assessment is included in the ES.

Policy NE22 Independent Assessment

States that “Where a planning application relates to a SAC, SSSI, SLINC or LNR or could have an adverse impact on such a site, or relates to a site that contains or is likely to contain a protected species or a UK Biodiversity Action Plan priority habitat/species or species of conservation concern, the City Council will require the submission of:

a. an independent ecological survey;
b. an assessment of the likely impact of the proposed development;
c. details of any measures the developers propose to mitigate any harmful effects (including the protection of part of the site or, where appropriate, the provision of a replacement habitat elsewhere); and
d. details of any measures to create or enhance habitats which the developers propose.”

Our scheme will be located within several SLINCs and within areas containing protected and priority habitat/species.

In compliance with the above policy, we have undertaken ecological surveys throughout the scheme area, and our ES provides a full ecological impact assessment of the likely impact of the OFAS on the ecology in the survey areas. The ES includes relevant survey information, a detailed impact assessment and full details of proposed mitigation measures (including enhancement opportunities).

Policy HE1 Nationally Important Monuments

This states that “Planning permission will not be granted for any development that would have an unacceptable effect on a nationally important monument (whether or not it is scheduled) or its setting.”

There is one area where a Scheduled Monument is present within the scheme area - the culverts under Old Abingdon Road. The ancient causeway which incorporates the historic stone culverts is known to be at least medieval and could possibly be Roman or Saxon. Due to the high value (considered to be of national significance) and scheduled status of the culverts, we have altered the route of the channel to minimise the impact on the Scheduled Monument as far as possible. There will be an impact however from partial removal of other features including norman and medieval culverts, road surfaces and structures, which will lead to the reduced significance of the structure during the construction of the channel culverts. Once the scheme is operational there will be a minor benefit due to the enhanced setting of the scheduled culverts as we will be installing information boards relating to this historical asset. In consultation with the City and County Archaeologist, we
will carry out further targeted excavation work on this Scheduled Monument and the ancient causeway that crosses the bridge.

**SR2 Protection of Open Air Sports Facilities**

States that “Planning permission will not be granted for development that would result in the loss of open-air sports facilities, including school playing fields, where there is a need for the facility to be retained in its current location, or the open area provides an important green space for local residents.

Where this is not the case, planning permission will only be granted where there is no need at all for the facility for the purposes of open space, sport or recreation, or where:

i) there is a need for the development;

ii) there are no alternative non-greenfield sites; and the facility can be replaced by either:

   a) providing an equivalent or improved replacement facility; or
   b) upgrading an existing facility.”

There is a clear need for the scheme in its current location. Our commentary relating to conformity with this policy is included at the end of Policy CS21 of the Oxford Core Strategy (Section 5.3.1).

**SR5 Protection of Public Open Space**

States “Planning permission will not be granted for development that would result in the loss of public open space including parks, common land, nature parks and historic cemeteries.”

Our commentary relating to conformity with this policy is included at the end of Policy CS21 of the Oxford Core Strategy (Section 5.3.1).

**SR8 Protection of allotments**

States that “Planning permission will not be granted for the development of allotment land in active cultivation unless:

a. there is a need for the allotments to be developed for a use which would serve an important wider community interest and for which there is no alternative site; and

b. replacement land will be provided which is as good in quality and as accessible to its users as that which it replaces.

Where allotments are no longer in active cultivation, development will only be permitted where:

c. most or all of the allotments have fallen into disuse;

d. there is no evidence of demand for use of the allotments after appropriate efforts have been made to bring them into use; and

e. there is no need for the allotments to be used for other outdoor recreational purposes.”

The construction of the scheme, which will provide a significant benefit to the community through a reduction in flood risk to people, property and infrastructure, will result in the loss of three allotments at Bulstake Close and two allotments at Osney Mead. The loss of allotment gardens will be mitigated through the provision of a larger area of allotments to the west of the existing allotments at Bulstake Close, of as good in quality as those lost, and in a nearby location accessible to its users.

### 5.4.4 Oxford Sites and Housing Plan

The Sites and Housing Plan is part of Oxford’s Local Development Framework (LDF) and Oxford’s Local Plan and is one of the documents against which planning applications are judged. It includes detailed planning policies that planning applications for residential development are considered against and it allocates sites for development for housing, employment and other uses.
The proposed scheme will not impact upon sites allocated for residential or employment uses and in many cases may increase the feasibility of both residential and employment activities in Oxford through reduced flood risk and resilience.

5.4.5 Vale of White Horse Local Plan 2031 Part 1: Strategic Sites and Policies

The VoWH Local Plan 2031 Part 1: Strategic Sites and Policies, 2016 provides a policy framework for the delivery of sustainable development across the district up to 2031. It will be used to inform decisions on planning applications.

The Local Plan 2031 Part 2 will set out policies and locations for housing for the Vale’s proportion of Oxford’s housing need unable to be met within the city boundaries. This document will replace the Saved Policies of the Local Plan 2011, and may allocate additional development sites for housing and other uses.

The VoWH Local Plan Part 1 includes a number of policies relevant to the proposed scheme, including:

Core Policy 1 Presumption in Favour of Sustainable Development

This requires applications to accord with the policies of the plan unless material considerations dictate otherwise, or if policies are not relevant or out of date the proposals will be granted consent unless material considerations dictate otherwise. Our proposals are designed to meet the principles of sustainable development and have complied as far as possible with all policies in the Plan, while still being fit for purpose as a flood alleviation scheme.

Core Policy 6 Meeting Business and Employment Needs

Specifies the scale and location of opportunities for economic growth. The proposed scheme is located close to a number of strategic employment sites, close to the A420 Botley Road. The scheme will protect homes and businesses by reducing flood risk and as such will have a positive economic impact.

Core Policy 7 Providing Supporting Infrastructure

Requires that all new development provides necessary onsite, and as appropriate off site infrastructure. Given the nature of our proposals we will be doing this, and will be upgrading and reinstating existing footpaths and bridges as appropriate. Whilst the scheme is being constructed, existing infrastructure will be open, although there may need to be some diversions, but post construction all existing routes will remain.

Core Policy 13 The Oxford Green Belt

Seeks to protect the land that continues to meet the five purposes of Green Belt and maintaining the setting of and managing the growth of the city of Oxford.

There are three Sub-Area Strategies which have been prepared by VoWH. Part of the proposed site is within the Abingdon-on-Thames and Oxford Fringe Sub-Area. The Sub-Area covers the northern and north eastern parts of the VoWH and has strong linkages with the city of Oxford. Over 40% of this Sub-Area is located within the Oxford Green Belt.

Core Policy 13 states that “Proposals for inappropriate development will not be approved except in very special circumstances.”

An appraisal of the scheme against national policy has been explored in Section 6 of this document, detailing why the scheme has Very Special Circumstances that exist that outweigh any harm.

Core Policy 33 Promoting Sustainable Transport and Accessibility

Outlines that “The Council will work with Oxfordshire County Council and others to:

ii. ...ensure that developments are designed in a way to promote sustainable transport access both within new sites, and linking with surrounding facilities and employment”.
All existing public access routes in the scheme area will remain following completion of the works. The existing footpath from OAR to South Hinksey will be diverted along the edge of the second stage of the new channel. During construction a temporary footpath diversion will be used on Willow Walk to maintain public access during the works. Further commentary on this is set out in relation to Policy CS13 of the Oxford Core Strategy.

Core Policy 34 A34 Strategy

States that the Council will continue to work with Highways England, Oxfordshire County Council and other partners to develop and implement a Route Based Strategy for the A34, which enables it to function as a major strategic route, thereby reducing consequential congestion on the local road network.

Our proposals will have a minor adverse impact on the A34 during construction, when we will be keeping traffic using the route to a minimum and monitoring air quality. This is set out in the Environmental Statement and will be supported in the Construction Environmental Management Plan that will be agreed prior to the commencement of construction.

Core Policy 35 Promoting public transport, cycling and walking

We will be encouraging cycling and walking by maintaining the openness of existing routes as far as possible during construction with some diversions as appropriate but post construction existing routes will remain and will have been upgraded in places.

Core Policy 37 Design and Local Distinctiveness

Seeks to ensure that new development is of high quality design which responds positively to its surroundings, is well connected and incorporates and/or links to high quality Green Infrastructure and landscaping to enhance biodiversity.

Although visible infrastructure will be limited, we have undertaken a detailed design process, including public consultation to ensure that, in particular, the design of bridge parapets that we have proposed is appropriate to the local context.

In terms of landscaping, the scheme protects the distinctive flood meadow and pasture grazing characteristics of the floodplain as well as creating valuable new wetland habitats.

Core Policy 40 Sustainable Design and construction

The Council encourages developers to incorporate climate change adaptation and design measures to combat the effects of changing weather patterns in all new development. Our proposals are the epitome of this approach and specifically allow for climate change within the calculations during the design of the scheme. They account for projected climate change as, relative to present day (2016), the 100-year inflows have been increased by 35%. We will ensure that our contractor uses well-maintained equipment and implements construction procedures that minimise vehicle emissions and ensures the sustainable use and disposal of materials. We have incorporated environmentally sustainable techniques and materials (e.g. sustainable timber for use in new bridges) into the design of the Scheme.

Core Policy 42 Flood Risk

States that “A site-specific flood risk assessment will be required... for all proposals for new development, including minor development and change of use in Flood Zone 2 and 3... Appropriate mitigation and management measures will be required to be implemented”. The proposed scheme is in an area designated as Flood Zone 3 as shown on the Environment Agency’s Flood Maps for Planning.

The proposals address flooding from the main channel of the River Thames and from the Hinksey and Bulstake Streams. There are around 1,500 properties within the areas where flood risk will be reduced, some of which flood frequently. Floods in this part of Oxford also cause transport disruption, with frequent closure of the A420 Botley Road, Abingdon Road and the railway.
An FRA is submitted with the planning application. The FRA, which is informed by detailed hydraulic modelling demonstrates that there is no increase in flood risk to properties in surrounding areas, including the downstream communities.

Core policy 42 also states that “All development proposals must be assessed against the Vale of White Horse and South Oxfordshire Strategic Flood Risk Assessment and the Oxfordshire Local Flood Risk Management Strategy to address locally significant flooding. Appropriate mitigation and management measures must be implemented.”

Relevant Strategic Flood Risk Assessments (SFRAs) and Local Flood Risk Management Strategies have been reviewed as material considerations, as part of this planning policy review.

Core Policy 43 Natural Resources

States that “The Council encourages developers to make provision for the effective use of natural resources where applicable, including:

h. minimising waste and making adequate provision for the recycling of waste on site...”

As detailed in the response to Oxford Core Strategy Policy CS9, the design of the scheme has set out to maximise the re-use of existing materials on site and find appropriate sites to dispose of materials as close as possible to the site. The Materials Management Plan explains how excavated material will be used on the site and in restoration schemes off site.

Core Policy 44 Landscape

States that “The key features that contribute to the nature and quality of the Vale of White Horse District’s landscape will be protected from harmful development and where possible enhanced, in particular:

i. features such as trees, hedgerows, woodland, field boundaries, watercourses and water bodies

ii. important landscape settings of settlements

iii. topographical features

iv. areas or features of cultural and historic value

v. important views and visually sensitive skylines, and

vi. tranquillity and the need to protect against intrusion from light pollution, noise, and motion.”

Conformity with this policy is set out in the commentary under Policy CP11 of the Saved Policies of the Oxford Local Plan 2001-2016 earlier in this document.

Core Policy 45 Green Infrastructure

States that “A net gain in Green Infrastructure, including biodiversity, will be sought either through on-site provision or off-site contributions and the targeted use of other funding sources. A net loss of Green Infrastructure, including biodiversity, through development proposals, will be resisted.”

A Green Infrastructure Study (Gillespies 2016) was developed to support the OFAS, which forms an integral part of the scheme development. This study was prepared to analyse existing assets (e.g. woodland areas, churchyards, allotments, ecological spaces, amenity land etc) to be protected and to help identify key areas and opportunities to enhance Green Infrastructure. This study fed into the detailed design, Landscape Plans and Landscape Masterplan for the scheme to seek net gains in Green Infrastructure and avoid net losses. This is set out in the ES and supporting landscape documentation.

Core Policy 46 Conservation and Improvement of Biodiversity

States that “Development that will conserve, restore and enhance biodiversity in the district will be permitted. Opportunities for biodiversity gain, including the connection of sites, large-scale habitat restoration, enhancement and habitat re-creation will be actively sought, with a primary focus on delivery in the Conservation Target Areas. A net loss of biodiversity will be avoided.”
We are using the biodiversity calculator promoted by Thames Valley Environmental Records Centre (TVERC - Biodiversity Impact Assessment Calculator v2.1) to calculate biodiversity gains and losses associated with the scheme. This has calculated that the scheme will deliver an overall net gain in habitat.

We have designed a scheme that will result in the creation of a new wildlife corridor within part of the Thames and Cherwell Conservation Target Area, delivering river and wetland habitat through the creation of a two-stage channel, with a series of wetland features including backwaters, ponds and scrapes, and associated planting. The channel will incorporate a variety of profiles and gradients, to include an undulating or stepped bed profile where possible, to maximise biodiversity.

5.4.6 Vale of White Horse Local Plan 2031 Part 2 Detailed Policies and Additional Sites Publication Version October 2017

This document provides the detailed policies required to determine planning applications. At the moment, however it is the ‘Publication Version’ which is intended for submission to the Secretary of State in February 2018 for independent public examination. Therefore, while we can assess our proposals against the policies in the document as they stand they are not yet adopted, nor have they passed any test of ‘soundness’. The following policies are relevant to our proposals:

Development Policy 16 Access
This policy requires that adequate provision will be made for loading, unloading, circulation, servicing and vehicle turning, and acceptable off-site improvements to the highway infrastructure (including traffic management measures), cycleways, public rights of way and the public transport network can be secured where these are not adequate to service the development.

Access is addressed in the ES and a construction phase Traffic Management Plan will be prepared by the contractor and agreed by Oxfordshire County Council/Highways England prior to construction. In terms of the walking and cycling, existing routes will be maintained and in some cases upgraded.

Development Policy 17 Transport Assessment and Travel Plans
This requires applications for major development, which includes our proposals, to be supported by a Transport Assessment (TA) or Statement and Travel Plan. Our application is supported by a TA and no trip generation will take place during the operational phase so the TA covers the construction phase to ensure that the traffic from that does not impact on the network. The CTMP will expand on this. Due to the end use of our development a Travel Plan is not required.

Development Policy 23 Impact of Development on amenity
This states that “Development proposals should demonstrate that they will not result in significant adverse impacts on the amenity of neighbouring uses when considering both individual and cumulative impacts in relation to the following factors:

i. loss of privacy, daylight or sunlight
ii. dominance or visual intrusion
iii. noise or vibration
iv. dust, heat, odour, gases or other emissions
v. pollution, contamination or the use of / or storage of hazardous substances; and
vi. external lighting."

Our proposals once constructed will comply with this policy. During the construction phase there will be impacts but mitigation will be provided as far as possible in order to ensure that any impact on amenity is minimal. The contractor’s CEMP that will be produced will go a long way in addressing a lot of these issues.
Development Policy 25 Noise Pollution
This policy is only applicable to noise generating development. Once our scheme is built it will produce no noise. That said there will be some noise during construction but this will be minimised and mitigated as appropriate.

Development Policy 26 Air Quality
This requires that “proposals that are likely to have an impact on local air quality, including those in, or within relative proximity to, existing or potential Air Quality Management Areas (AQMAs) will need to demonstrate measures / mitigation that are incorporated into the design to minimise any impacts associated with air quality.”

There are potential impacts on air quality, particularly during the construction process, including dust and issues generated by traffic. We have worked closely with the Local Authority particularly after the pre-application comments were received in order to ensure that the impacts are as small as possible. Best practice mitigation measures will be implemented as set out in the CEMP which will be implemented to be agreed prior to construction, as well as tight controls on types and routes of vehicles. The ES considers the impact on air quality to be negligible once mitigation is in place.

Development Policy 29 Settlement Character and Gaps
This policy requires that proposals will need to demonstrate that the settlement’s character is retained, and physical and visual separation is maintained between settlements.

Our proposals do this and actually protect the gaps between settlements by making the land unavailable for development once in use for the flood alleviation scheme. There is a whole section providing a commentary on this in the Green Belt statement in this document.

Development Policy 30 Watercourses
This policy states that “Development of land that contains or is adjacent to a watercourse will only be permitted where it would not have a detrimental impact on the function or setting of the watercourse or its biodiversity, or the detrimental impact can be appropriately mitigated.”

Our proposals will provide flood alleviation benefits, and will actually enhance the function of the watercourse. There are a number of biodiversity mitigation proposals as part of our scheme which have been set out in this document but are explained in detail in the accompanying ES.

Development Policy 31 Protection of PRoW, National Trails and Open Access Areas
States that development on and / or over public rights of way will be permitted where the development can be designed to accommodate satisfactorily the existing route, or where the right of way is incorporated into the development site as an attractive, safe and continuous route. Alternative routes will need to be made equally or more attractive, safe and convenient to rights of way users.

With mitigation measures in place the impact as set out in the ES is considered to positive. There will be an improved level of cycling provision and safety and improvements to PRoW/bridleways. New permanent access tracks will be made available for public use, except on the rare occasions when we need to move heavy machinery along them.

Development Policy 33 Open Space
Seeks to protect open space and access to it. During construction there will be a number of routes as previously explained that will need to be temporarily re routed. Full details are contained within the ES. During the operational phase we will enhance a number of existing access routes in line with modern standards. Post construction there will be a permanent loss of public access land comprising a loss of 1.6ha at Seacourt Nature Park 1.4ha at Kendall Copse and 0.28ha at Kennington Pond. There will also be a permanent loss of 0.3ha of level open space at Oatlands Recreation Ground in the footprint of the proposed bund, but the new sloping area can continue to be used by the public.
**Development Policy 36 Heritage Assets**
Requires that proposals for new development that may affect heritage assets (designated and non-designated) must demonstrate that they conserve and enhance the special interest or significance of the heritage asset and its setting in accordance with Core Policy 39.

A full appraisal of our proposals in light of any impacts on heritage assets is contained within the ES setting out impacts during construction and operation. The completed Scheme will provide a reduced flood risk to a variety of sites of historic interest including Listed Buildings within South Hinksey, Grandpont, New Hinksey and Abingdon Road, as well as Templeton College and Iffley Lock, Conservation Areas, Scheduled Monuments and other heritage assets, and is expected to have a slightly adverse impact on them.

**Development Policy 38 Listed Buildings**
This policy relates to development significantly impacting on listed buildings which our proposals will not. The completed Scheme will provide a reduced flood risk to a variety of sites of historic interest including Listed Buildings within South Hinksey, Grandpont, New Hinksey and Abingdon Road, as well as Templeton College and Iffley Lock, Conservation Areas, Scheduled Monuments and other heritage assets.

**Development Policy 39 Archaeology and Scheduled Monuments**
Seeks to ensure that development will be permitted where it can be shown that it would not be detrimental to the site or setting of Scheduled Monuments or nationally important designated or non-designated archaeological remains.

There is one Scheduled Monument, the Old Abingdon Road (OAR) Culverts within the scheme area. The ancient causeway with historic stone culverts under OAR is known to be at least medieval and could possibly be Roman or Saxon. Due to the high value and scheduled status of the culverts, alternative alignments for the scheme were considered, and we have designed the scheme in order to avoid it in consultation with archaeologists at Historic England. During construction there is anticipated to be a slightly adverse impact, but once operational it is expected to be beneficial. Full details are provided in the ES.

**5.4.7 Saved policies of the Vale of White Horse Local Plan**
Saved policies of the Local Plan 2011 form part of the Development Plan for the VoWH, until the Local Plan 2031 Part 2 (Detailed Policies) is adopted. There are a number of saved policies relevant to the proposed scheme, including:

**Policy DC3 Design against crime**
This policy requires the design of new buildings and the spaces surrounding them and access provisions to be arranged to increase security and deter crime, with proposals on existing development to increase security allowed as long as there’s no harm to the character of the area.

Our proposals during construction will implement all the necessary security to ensure that as far as possible the site and the equipment located in it are secure. Once the development is complete there are a number of upgrades to existing bridges to bring them into line with modern standards. The scope for lighting and other security measures is however limited given the site’s location in the Green Belt and in order to ensure that the setting of any historic buildings or heritage features is not adversely impacted.

**Policy DC5 Access**
States that “Proposals for development will only be permitted provided that...:

iii) Adequate provision will be made for loading, unloading, circulation, servicing and vehicle turning;
iv) **Adequate and safe provision will be made for parking vehicles and cycles...**

Access is addressed in the ES and a construction phase Traffic Management Plan will be prepared by the contractor and agreed by Oxfordshire County Council/Highways England prior to construction.

**Policy DC6 Landscaping**

States that “**All proposals for development will be required to include hard and soft landscaping measures designed to:**

i) **Protect and enhance the visual amenities of the site and its surroundings including, where appropriate, existing important landscape features; and**

ii) **Maximise the opportunities for nature conservation and wildlife habitat creation.”**

The proposed scheme is located within the Green Belt and Protected Views of Oxford City. The scheme has been designed to sensitively consider these designations through use of locally appropriate hard and soft landscape works and careful consideration of the aesthetic appearance of flood defences in sensitive areas. The impacts on View Cones and associated mitigation for landscape and visual impacts are outlined in the ES and in the Landscape Masterplan.

**Policy DC7 Waste Collection and Recycling**

Seeks to ensure that new developments make adequate provision for the sorting, storage and collection of waste arising from the site.

Surplus material will be disposed of appropriately with the majority reused on site or taken off site to local restoration schemes. A full commentary on the options is included in the Materials Management Plan.

**Policy DC9 The Impact of Development on Neighbouring Uses**

Seeks to ensure that development does not unacceptably harm the amenities of neighbouring properties and the wider environment.

The ES assesses the impacts of the scheme in terms of noise, air quality, visual amenity and other aspects that have the potential to affect the local community during construction and upon completion.

Any temporary changes in noise and air quality that may have otherwise be experienced by the local community during construction of the scheme are appropriately mitigated to avoid unacceptable harm. We will also implement a six month air quality monitoring campaign at a number of locations, agreed with Oxford City Council and the Vale of White Horse District Council to monitor pollutant concentrations.

**Policy DC12 Water Quality and Resources**

States that “**Development will not be permitted if it would adversely affect the quality of water resources, including groundwater, rivers and lakes...**” Maintaining at least the existing water quality in all channels of the river, including new channels, is a key constraint for the project.

There is potential for some significant impacts on water and geomorphology during the construction phase relating to pollution incidents, creation of new pathways for contaminated groundwater, loss of in-channel habitat, silt deposition and suspension etc, as described in the ES. However, no significant long-term impacts on water quality are anticipated and mitigation measures will be implemented during construction that will be defined in a CEMP and surface water management plan for the Scheme. A detailed Water Framework Directive assessment has been undertaken as part of the EIA process and included within the ES to assess the impacts of the scheme on the relevant waterbodies in the study area, and to outline any opportunities for mitigation.

The WFD assessment concluded that the Scheme will not cause or significantly contribute to a deterioration in either overall status of any water body, or elements or prevent objectives from being achieved. The Scheme will in fact result in a net positive contribution to the waterbodies in question,
by contributing to WFD mitigation measures assigned to the Thames (Evenlode to Thame) water body, including: removal of structures to improve connectivity and fish passage; improving channel flow; and a net increase in channel/riparian habitat.

**Policy TR5 The National Cycle Network**

States that “Planning permission will not be granted for development which inhibits the use of any part of the existing footpath or cycle network or the implementation of the proposed improvements to the networks... unless a safe direct and convenient alternative can be provided.”

An assessment of the impacts of the scheme on the local community including existing footpaths and the cycle network is provided in the ES. There is a Sustrans National Cycleway across Willow Walk and part of National Cycle Network 5 crosses the site. Both will be affected during construction with diversions, with permanent diversions during operation adjacent to existing.

**Policy HE1 Preservation and enhancement: implications for development**

States that “Proposals for development or other works within or affecting the setting of a conservation area will not be permitted unless they can be shown to preserve or enhance the established character or appearance of the area.”

The proposed scheme is adjacent to North Hinksey Conservation Area in VoWH. However, it is not expected that the setting of this conservation area will be impacted by the scheme. Further commentary on this is set out in the ES.

**HE4 – Setting of listed building**

Seeks to protect the setting of listed buildings. Our proposals are not considered to have any adverse impacts to listed buildings within South Hinksey, Grandpont, New Hinksey and Abingdon Road that require mitigation, and due to flood risk reduction, the impact on them is considered to be beneficial.

**Policy HE9 Archaeology**

States that “Where there are reasonable grounds for believing that important archaeological remains may be disturbed or otherwise adversely affected by a development proposal the applicant will be required to carry out an archaeological field evaluation of the site and its setting before the planning application is determined.”

Our approach to archaeology is set out in our commentary to relating to the NPPF Section 12 – ‘Conserving and Enhancing the Historic Environment’. We have undertaken extensive archaeological investigations, agreed with Oxfordshire County and Oxford City Council archaeologists.

An archaeological impact assessment is provided in the ES, and the results of which have been set out elsewhere in this policy appraisal.

**HE10 Nationally important archaeology remains**

Seeks to ensure that development that would cause damage to the site or setting of nationally important archaeology remains will not be permitted.

There is one Scheduled Monument (OAR Culverts) within the scheme area. Due to the high value and scheduled status of the culverts, alternative alignments for the scheme were considered, and now form part of our proposals which avoids the culverts. With mitigation implemented there is considered to be a slightly adverse impact during construction and a slightly beneficial impact during operation. Full details are provided in the ES.

**HE11 Development affecting important archaeological sites**

Requires development affecting important archaeological sites to be designed to achieve preservation in situ or if this is not possible the development will not be allowed to commence until a programme of archaeological investigation has been agreed and its implementation secured.
Significant archaeology work has been undertaken to date and is set out fully in the ES. Comments on the impacts of the scheme on archaeology have been set out previously in this document, suffice to say that mitigation is proposed as appropriate to reduce any impacts as far as possible.

**NE7 North Vale Corallion Ridge landscape**

This policy seeks to ensure that the prevailing character and appearance of the North Vale Corallian Ridge is not harmed, and proposals that do so will not be allowed unless there is an overriding need for the development and all steps have been taken to minimise the impact on the landscape.

The Scheme runs through the Corallian Ridge policy area to the north of South Hinksey Village.

The loss of trees, hedgerows and areas of pasture within the Scheme area will result in the erosion of the existing character of the Scheme area during construction, which may have some temporary impacts on the North Vale Corallian Ridge landscape. However, after three years of completion of the Scheme, proposed planting and the seeded grasslands will have become established, blending the Scheme with the wider landscape. After 15 years when the proposed planting has become semi-mature, the Scheme will appear as an integral part of the North Vale Corallian Ridge, and will have a beneficial impact on the prevailing character and appearance of this landscape type.

**Policy NE8 The Landscape Setting of Oxford**

The proposed scheme flows through ‘Protected Views of Oxford City’. Policy NE8 states that “The conservation of Oxford’s landscape setting will take priority in considering proposals for development in areas within view of the city. Development will not be permitted if it would:

i) Harm the landscape setting of Oxford; or

ii) Obscure or detract from an important view of the skyline of collegiate Oxford, particularly within the view cones as defined on the proposals map.”

The excavation of new flood channels, re-profiling of watercourses, construction of new flood bunds and walls, and the loss of mature trees, in and around the Scheme area will result in some long-term changes in landscape and views. In particular, there will be a deterioration in views for recreational users and changes to the landscape character of Seacourt Nature Park, Botley Meadow, Willow Walk and Devil’s Backbone public rights of way, Kendall Copse and Kennington Pool Local Wildlife Site for up to three years following completion of the Scheme. After 15 years from Scheme completion, there will only be significant impacts on the views and landscape character at Kendall Copse due to the presence of the new culverts/bridges and new channel. However, at this time, the vegetation within the copse will be reaching semi-maturity, helping to integrate the new bridges and channel into the semi-urban landscape.

**5.5 Other Material Considerations**

**5.5.1 Oxfordshire Local Flood Risk Management Strategy**

As the Lead Local Flood Authority, Oxfordshire County Council has duties and powers to enable it to manage flood risk from localised sources across the County and a duty to develop, maintain, apply and monitor a strategy for local flood risk management that encompasses all sources of flooding. The strategy is outlined within the Local Flood Risk Management Strategy (LFRMS).

In general terms, the Flood and Water Management Act (2010) requires Risk Management Authorities to act consistently with the LFRMS when undertaking flood risk management functions, except for water companies who will need to have regard to it.

The LFRMS states that “The prevention of flooding to properties in Oxfordshire cannot be eliminated, however, by working collaboratively with our partner organisations we can seek to reduce the effects of flooding and the damage it causes...
This risk can be minimised with better responses and reduced impacts by working with the correct agencies and utility companies.

- **Major permanent flood alleviation projects** – Government & Environment Agency main responsible bodies, with local flood risk authorities as main local stakeholders.
- **Planned large scale temporary demountable flood defences** (e.g. Osney Island) – Environment Agency, with local flood risk authorities as main local stakeholders.
- **Smaller scale temporary demountable flood defences** (e.g. Bullstake Close, Oxford off the A420 at Botley) – OCC & district councils, with local residents as main stakeholders."

Our proposals address flood risk in Oxford and the OFAS is a partnership scheme, as outlined in the LFRMS. It is in line with the general aims of the Oxfordshire Local Flood Risk Management Strategy.

### 5.5.2 Oxfordshire County Council Minerals and Waste Level 1 SFRA (2015)

This document was prepared after an agreement made between Oxfordshire County Council and the Environment Agency. The most up to date flood risk information from fluvial, surface water and groundwater sources has been collated and analysed to provide a high level overview of flood risk to the broad areas identified for mineral extraction and strategic/non-strategic waste facilities.

This SFRA is used by Oxfordshire County Council as the Minerals and Waste Planning Authority to inform decisions regarding mineral and waste site allocations and policies. The SFRA should be used as an evidence base from which to direct new development where possible to areas of low flood risk, and where development cannot be located in Flood Zone 1, the SFRA flood maps should be used to apply the sequential approach to the remaining land use allocations.

Given that our proposals address flood risk in Oxfordshire and the OFAS is a partnership scheme, it is in conformity with the intentions behind the SFRA.

### 5.5.3 Oxfordshire Local Transport plan 4 - Connecting Oxfordshire (updated 2016)

The Local Transport Plan (LTP) 4 for Oxfordshire includes a number of high level goals for transport improvement and innovation for Connecting Oxfordshire. These are:

1. **To support jobs and housing growth and economic vitality;**
2. **To reduce emissions, enhance air quality and support the transition to a low carbon economy**
3. **To protect and enhance the environment and improve quality of life (including public health, safety and individual wellbeing).”**

The LTP4 builds on an existing programme of highway and transport schemes focused on unlocking economic growth. It sets out a new transport strategy for the whole of Oxfordshire, covering the period 2015-2031.

The proposed OFAS will be located between the A34 to the west and the Oxford to Didcot railway line to the east.

Paragraph 27 of the LTP4 states that “The A34 carries up to 70,000 vehicles per day, including a large proportion of lorries. As the county relies heavily on the A34 for internal trips, and it forms part of the Oxford ring road, the severe congestion it suffers is damaging to the local, as well as the national economy.”

Schemes proposed for the A34 within the LTP4 include new slip roads at Chilton Interchange to turn this into an all movements junction and a “hamburger” style improvement to the Milton Interchange.
Roundabout to improve access onto the A34 from Didcot. A bus priority lane is also proposed on the northbound approaches to the A34 exit slip road at Hinksey Hill Interchange.

Strategic rail priorities outlined within the LTP4 include:

- “Additional tracks between Oxford and Didcot to provide increased freight and passenger capacity, including the expansion of Culham Station;
- Opening of the Cowley rail line to passenger services, with new stations serving the Oxford Science Park and Oxford Business Park”.

The proposed scheme will increase the resilience of nearby transport infrastructure by a reduction in flood risk, including the Oxford to Didcot rail line.

5.5.4 Revised Oxfordshire Statement of Community Involvement 2015

The Oxfordshire Statement of Community Involvement (SCI) sets out the County Council’s policy, and the standards it will seek to achieve, to ensure meaningful and effective consultation, engagement and involvement of consultees, stakeholders and other interested members of the community in the consideration of planning applications for mineral, waste and County Council developments that are determined by the County Council.

It states that where a proposal is likely to have an impact on local communities, the SCI encourages applicants to liaise with those communities as early as possible. By engaging the public prior to formally submitting a planning application, there is more scope for the details of the proposals to be adjusted to take into account local views. The applicant also has a role in helping the public to fully understand proposals, as having a good knowledge of what is being proposed is essential for effective participation in the consultation process.

Our approach to date has followed the principles set out in the document. Further appraisal of our scheme against the SCI is contained within our own SCI document, setting out how the scheme has complied with this and the consultation taken to date and its influence on proposals.

5.5.5 Oxford Strategic Flood Risk Assessment Level 1 March 2011

The Oxford Strategic Flood Risk Assessment (SFRA) produced by Oxford City Council presents the current understanding of flood risk within the City of Oxford. The document is a Level 1 SFRA and provides the information required to undertake the Sequential Test. If the Sequential Test identifies potential allocated sites to be within flood risk areas, a Level 2 SFRA is also prepared.

The latest flood data included within the document relates to 2007 and shows that the main areas that experienced flooding during this event were; the area surrounding Botley Road, between New Osney and Botley and the area surrounding Abingdon Road through New Hinksey. The SFRA states that “Botley Road and Abingdon Road are closed during most flood events.”

The SFRA outlines that key measures to significantly reduce flood risk “are likely to include increasing flood conveyance through the western part of the Thames floodplain.”

Our proposals will address flood risk issues in Oxford and are in accordance with this.

Oxford City Council are currently reviewing their SFRA as part of the Local Plan review. We are working with them to ensure that the flood modelling data and information on OFAS is as up to date as possible.

5.5.6 Oxford Statement of Community Involvement in Planning 2015

The Statement of Community Involvement (SCI) in Planning sets out how Oxford City Council’s approach to involving the community and stakeholders in the production of planning policy documents and planning control decisions in the city. It sets out the activities that the Council will undertake to reach stakeholders and the public during the various stages of preparation of Local
Plan documents. In preparing the SCI, consultation was undertaken to help develop an approach that reflects the needs and aspirations of the community, stakeholders and the City Council.

Further appraisal of our scheme against the SCI is contained within the SCI document, setting out how the scheme has complied with this and the consultation taken to date and its influence on proposals.

**5.5.7 Oxford Informal Assessment of the Green Belt (May 2014, Oxford City Council)**

This assessment was undertaken by Oxford City Council as a response to the great level of housing need that exists in Oxfordshire, and particularly in Oxford. It states that “The intention of this assessment is to investigate whether there is likely to be potential for urban extensions to be developed to meet Oxford’s housing need. The assumption is made for this assessment that Oxford’s needs will be most sustainably provided in an urban extension that is close and well connected to Oxford. Because Oxford is surrounded by Green Belt, this would inevitably require Green Belt boundaries to be reviewed as part of a Local Plan process.”

Thus the fundamental aim of Green Belt policy, as stated in paragraph 79 of the NPPF, is to prevent urban sprawl by keeping land permanently open. Green Belt boundaries are not set in stone; the NPPF sets out a mechanism for review of boundaries. Two characteristics of Oxford’s setting are particularly important – the views and the green corridors formed by the River Thames and River Cherwell - and the open character of countryside around Oxford is essential to preserving these defining characteristics.

To assess the potential impact of developing within Green Belt, it is first necessary to assess the function of different areas of Green Belt, by dividing the Green Belt into segments.

An assessment was made of how each of the identified segments of Green Belt perform against each of the five purposes of the Green Belt. All areas of Green Belt will make some contribution to the Green Belt purposes, but not all will make the same level of contribution to all of the purposes.

The proposed site falls within the ‘Green Lungs of Oxford: 035 Hinksey’ segment and the Oxford Informal Assessment document states that this area is almost entirely in high risk flood zones.

The assessment states that “Open countryside in these segments forms an intrinsic part of the characteristic landscape setting of Oxford. Furthermore, much of it has strong protection from development because of its high nature conservation value or because it is higher risk flood zone.” Therefore the segment 035 Hinksey has been rejected for further analysis.

An appraisal of our proposals against suitability for development in the Green belt is contained in the Green Belt Statement.

**5.5.8 VoWH SFRA Level 1 update October 2017**

Vale of White Horse recently updated their SFRA to reflect the latest legislation and guidance in relation to flood risk. It is broadly intended to enable to Council to seek to locate development in areas of lowest flood risk.

Our proposals will address flood risk issues in the District and therefore protect homes and businesses from flooding. The OFAS scheme is specifically mentioned in the document which was written in consultation with the Environment Agency.
5.5.9 VoWH Statement of Community Involvement Part 3 Getting Involved in Planning Applications adopted December 2016

Whilst this document is not as explicit in providing guidance for applicants submitting a planning application, there are a couple of paragraphs that are relevant and support our approach to consultation.

Part 1 Getting Involved in shaping our future states that “National policy asks local planning authorities to play a key role in encouraging developers and other parties to take advantage of the range of opportunities to engage in the planning process, and involve local communities and stakeholders as soon as possible. For example, at the pre-application stage, we encourage applicants to carry out early engagement with the local community, before submitting a planning application.”

Part 3 Getting involved in planning applications states that “The pre-application stage encourages applicants to carry out early engagement with the local community and the council, before submitting a planning application. We encourage the early discussion of schemes in the form of a pre-application”.

We have complied with the requirements of this document. Full commentary on our extensive pre-application consultation is provided in the SCI which accompanies our application.

5.5.10 North Hinksey Parish Neighbourhood Plan (draft October 2017)

This document is intended to set out the overall Vision and Objectives for the future of North Hinksey Parish, identifying how the local community would like the area to develop in the period up to 2031. We have consulted with and kept North Hinksey Parish Council up-to-date on a number of occasions throughout the evolution of the scheme. A first draft of this document has now been consulted on.

The document identifies a key element as: ‘Policies and community actions that promote excellent design of housing and commercial developments which are low rise and appropriate to the character of the local area, take account of localised flooding / groundwater issues, and incorporate environmentally friendly design features that help to improve the environment, and the health of the local community.’

The OFAS seeks to implement a scheme in keeping with the local area, maintaining and improving environmental features as far as possible as set out in the ES and explained throughout this chapter, whilst implementing a flood alleviation scheme which will protect around 1,500 properties with over 1,200 benefiting from a standard of protection greater than a 1 in 100 (1%) annual risk of flooding on opening.

The draft neighbourhood plan also makes specific mention of the OFAS. ‘There is a huge project in train to alleviate flooding in Oxford (the Oxford Flood Alleviation Scheme) which would change the course of the Seacourt Stream in North Hinksey, with implications for our allotments, as well as for the actual integrity of the parish (as the stream is the ancient boundary). Residents have concerns about the impact of the scheme on existing trees which play an important role on the flood plain in flood alleviation, strengthening river banks, biodiversity and amenity value; the historic Willow Walk and its handsome bridge (which are used and loved by many people from the Parish and Oxford); and on views from (and to) the parish. The project is not expected to reduce flooding in the vulnerable parts of the parish.’

As previously iterated the OFAS will have a positive impact by reducing flood risk to around 1,500 properties. The scheme needs to be located where it is in order to function effectively. Surrounding receptors and issues have been integral in the design process, and the scheme is intended to deliver the flood alleviation works whilst providing additional benefits as far as possible and reducing any adverse impacts. This is set out fully in the ES.
Policy UT1 – Flooding states that development proposals will be supported if they can demonstrate that they will not contribute to flood risk within North Hinksey Parish. Our proposals reduce the risk of flooding whilst being as sensitive to surrounding receptors as possible.

5.5.11 Thames: Catchment Flood Management Plan 2009

The Thames Catchment Flood Management Plan (TCFMP) is one of 77 CFMPs prepared by the Environment Agency for England and Wales. CFMPs outline the scale and extent of flooding now and in the future, and set policies for managing flood risk within the catchment. CFMPs should be used to inform planning and decision making by key stakeholders.

The proposed scheme falls under sub area 8: Heavily populated floodplain (Abingdon, Byfleet and Weybridge, Guildford, Hoe Stream, Lower Lee, Lower Roding, Lower Thames, Oxford, Reading). These sub-areas contain 10% (170km²) of the total area of floodplain within the Thames CFMP but have 40% (56,000 properties with a 1% risk of flooding from rivers) of the properties at risk. The CFMP states that “This figure is estimated to increase by between 5% and 25% in the future due to the impacts of climate change as most of these areas are in wide flat floodplains of major rivers... The flood risk is concentrated in known locations and problems with flooding from rivers are well documented. Large scale interventions will be expensive and difficult to build and maintain.”

In all of these areas, the most sustainable way of reducing flood risk will be through floodplain management. Proposed actions to implement the preferred policy are:

- “We will deliver the actions recommended in Flood Risk Management Strategies for Oxford, the Lower Lee, the Wey and Lower Thames once they are approved.
- In the short-term, we will encourage partners to develop policies, strategies and initiatives to increase the resistance and resilience of all new development at risk of flooding. We will also look at protecting land that may be needed to manage flood risk in the future, and work with partners to identify opportunities for this and to recreate river corridors in urban areas.
- In the longer-term, we need land and property owners to adapt the urban environment to be more flood resilient. This includes the refurbishment of existing buildings to increase resilience and resistance to flooding.
- We need to promote the management of flood consequences. By working with our partners we will improve public awareness and local emergency planning, for example identifying critical infrastructure at risk and producing community flood plans.”

Our proposals will address flood risk issues and protect homes and businesses from flooding, reducing flood risk.
Greenbelt Statement

6.1 Introduction

The proposed Oxford Flood Alleviation Scheme (OFAS) is located within the Green Belt to the west of Oxford. We have produced a Green Belt statement to appraise the proposals against national and local policy on the protection of Green Belt land, and to set out how our scheme is suitable for location within it.

6.2 Green Belt Planning Policy

The Planning Policy related to Green Belts is set at a national level in the National Planning Policy Framework (NPPF). This sets out what is and is not to be allowed within the Green Belt and under what circumstances exceptions can be made. The NPPF provides the framework for local policy which reflects all of its principles, but in a local context.

Our proposals comply with the policies set out in National and local Green Belt policy. Compliant proposals can be interpreted as one of two ways. They can be not inappropriate development and should be allowed provided a development will preserve the openness of the Green Belt and not compromise any of the reasons for including land within it. Or, if the development is considered inappropriate it should only be approved if Very Special Circumstances (VSC) can be demonstrated. Our interpretation of the guidance in relation to OFAS is set out later in this document and takes into consideration feedback received as a result of the formal pre-application submission.

NPPF

National planning policy on Green Belts is contained in Chapter 9 of the NPPF which states the following:

“79. The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.

The OFAS embodies this by preserving the Green Belt’s openness and reinforces the role of the floodplain whilst securing the area from future development and sprawl. The presence of the scheme will ensure the area is preserved as floodplain and reduces flood risk to properties in Oxford. The new channel has been designed to incorporate existing watercourses and create a new natural watercourse along the majority of its length and maintains the openness of the area. This is designed with similar features to the existing watercourses in the area and will behave as a natural river system. The second stage of the channel will be grassed and include grazing areas and new wetland habitats. Where structures such as bridges are required to maintain access routes these have been designed to be as low profile as possible whilst meeting current design standards. In-channel control structures have been minimised and kept simple to keep the system passive and functioning in a natural manner.

80. Green Belt serves five purposes:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns merging into one another;
- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.”

Our proposals will not impact on the five purposes that the Green Belt serves. The presence of the new channel will assist in checking the unrestricted sprawl of large built up areas and in the
safeguarding of the countryside by effectively making the land an area that could not be
developed on due to its use in relation to flood mitigation. The scheme has been designed to be as
natural in appearance as possible in the form of an unconstrained watercourse and areas returned
to grazing or new wetland habitats. Maintenance tracks have been designed in the style of the
stone farm tracks which are present elsewhere in the area and these will be encouraged to
vegetate over time to blend into their surroundings.

It then goes on to state that:

“87. As with previous Green Belt policy, inappropriate development is, by definition, harmful to the
Green Belt and should not be approved except in very special circumstances.

As part of our application, we acknowledge that a number of features of the proposals, such as
bridges could be considered inappropriate development. We have therefore set out the very
special circumstances later in this document that exist in order to justify them.

88. When considering any planning application, local planning authorities should ensure that
substantial weight is given to any harm to the Green Belt. ‘Very special circumstances’ will not exist
unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is
clearly outweighed by other considerations.

In our case we believe any harm is clearly outweighed by other considerations, not least of which
will be the reduction in flood risk to both residential and commercial properties, key infrastructure
services and transport links that the proposals would deliver.

89. A local planning authority should regard the construction of new buildings as inappropriate in
Green Belt. Exceptions to this are:

- buildings for agriculture and forestry;
- provision of appropriate facilities for outdoor sport, outdoor recreation and for
cemeteries, as long as it preserves the openness of the Green Belt and does not conflict
with the purposes of including land within it;
- the extension or alteration of a building provided that it does not result in
disproportionate additions over and above the size of the original building;
- the replacement of a building, provided the new building is in the same use and not
materially larger than the one it replaces;
- limited infilling in villages, and limited affordable housing for local community needs
under policies set out in the Local Plan; or
- limited infilling or the partial or complete redevelopment of previously developed sites
(brownfield land), whether redundant or in continuing use (excluding temporary
buildings), which would not have a greater impact on the openness of the Green Belt and
the purpose of including land within it than the existing development.

No new buildings or accommodation are proposed for OFAS. All new structures proposed are
critical to the achievement of the flood risk management benefits. These comprise of new bridges
to maintain transport links, a passive small weir to manage water levels during low flows, control
structures to manage flow during different events and have been designed to be as low as possible
to reduce visual impacts, telemetry cabinets and flood embankments and walls.

90. Certain other forms of development are also not inappropriate in Green Belt provided they
preserve the openness of the Green Belt and do not conflict with the purposes of including land in
Green Belt. These are:

- mineral extraction;
- engineering operations;
- local transport infrastructure which can demonstrate a requirement for a Green Belt
location;
- the re-use of buildings provided that the buildings are of permanent and substantial
Whilst our proposals are an engineering operation and involve minerals extraction as a byproduct of the scheme, there are new structures such as bridges which could be construed as buildings within it which may not fall under the exceptions set out in Section 89. Therefore, on the basis that some elements of the scheme may be considered inappropriate development, we have taken a robust approach and set out VSC that justify the scheme.

Local Policy

Policy C12 of the proposed Oxford Minerals and Waste Core Strategy states that “Proposals that constitute inappropriate development in the Green Belt, will not be permitted except in very special circumstances. ‘Very special circumstances’ will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

As set out under the NPPF section, we have decided to take what we feel is the most robust approach, setting out VSC that justify the scheme.

Conditions may be imposed on any permission granted to ensure that the development only serves to meet a need that comprises or forms an ‘other consideration’ in the Green Belt balance leading to the demonstration of very special circumstances.”

Oxford City Council’s Core Strategy Policy CS4 establishes that the general extent of the Green Belt inside Oxford’s boundaries will be maintained. Planning permission within the Green Belt will not be granted for inappropriate development, in accordance with national policy.

Core Policy 13 of the VoWH Local Plan 2031 (Part 1) seeks to protect land that continues to meet the five purposes of Green Belt and maintain the setting of and manage the growth of the city of Oxford. Policy 13 states that “Proposals for inappropriate development will not be approved except in very special circumstances.”

The local and national planning policies are consistent in their approach to development in the Green Belt. Our proposals comply with the policies, which is explained in the sections that follow.

6.3 Pre-application comments relating to development in the Green Belt

In the pre-application response from Oxfordshire County Council, received in August 2017, significant emphasis was placed on the scheme’s planning application requiring a sound evidence base in order to present a good supporting case for development in this location. There was some slightly conflicting advice within the response as to the appropriateness of our proposals, as the response was an amalgamation of comments from different organisations.

Oxford City Council for example stated:

“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 scheme’s design.”

This therefore tentatively states that the development is appropriate, or to use the language that is used in policy ‘not inappropriate’. However, it is caveated by stating that this is subject to the detail.

The Oxford Preservation Trust provided feedback that they felt that the scheme constitutes inappropriate development in the Green Belt. Whilst not suggesting that the development should
not take place they do set out a number of issues that need to be addressed in order to justify the scheme. They summarise their comments as follows:

“In terms of a proper assessment of the planning balance, and the harm by way inappropriateness and any other harm, that will be caused by this development, OPT’s view is that, if this development is to take place in the Green Belt, the applicant will need to show that there are very special circumstances over and above the reduction in flood risk. In this regard, increased public access, and safer off-road links between the communities on the western side of Oxford, would be a real, and long lasting benefit for the people of Oxford.”

The Vale of White Horse District Council stated that the scheme could either be considered an engineering operation or minerals extraction. They then state that if the proposal could be defined as an engineering operation and could, subject to compliance with the tests in paragraph 90 of the NPPF, be considered not inappropriate development in Green Belt. They state that the proposal would not comprise urban sprawl. In the main it appears the scheme could keep land open. However, at present it is unclear as to the impact on the rural setting and special character of the city of Oxford.

When weighing up the pre-application information against policy, and comments received from other parties, Oxfordshire County Council concluded that:

“At this time therefore, based on the information received to date, the County Council is of the view that whilst in principle the final proposed change of use of the land to a flood alleviation scheme would not be inappropriate development, there is an argument that, when taken as a whole, the proposed scheme would include substantial elements of inappropriate development in the Oxford Green Belt. In such a situation, very special circumstances would accordingly need to be demonstrated to justify making an exception to Green Belt policy and so a grant of planning permission, notwithstanding any other policy and material considerations. It is therefore advised that more detailed consideration should be given in the application, perhaps with reference to relevant appeal decisions/case law, as to why it is considered that the built elements of the development would not be inappropriate development – i.e. why the engineering structures (including the raised bunds) would not adversely affect openness or the purposes of Green Belt designation, with special reference to the setting and special character of Oxford. Alternatively, if you accept that the proposal would include inappropriate development in the Green Belt, the application should set out the very special circumstances that you consider should override the normal presumption against such development in Green Belt areas.”

Our approach taken in this Green Belt Statement is therefore in compliance with the comments received, requiring Very Special Circumstances (VSC) to be shown which clearly outweigh harm to the Green Belt and any other harm. This is detailed in the sections that follow.

6.4 The Issues

The main issues which need to be satisfied in this case in order to show that our scheme can be given planning consent for the parts of the scheme in the Green Belt are as follows:

- Are our proposals inappropriate development for the Green Belt?
- If so what harm would it cause to the Green Belt and are there any VSC which should result in the proposals being given consent?
6.5 Are the proposals inappropriate for the Green Belt?

Our proposals for flood alleviation works are considered to be an engineering operation, (as well as limited mineral extraction as an unintentional by-product of their location), and would therefore generally be considered to be a ‘not inappropriate’ development in line with the NPPF. This is supported in a number of comments received as part of the formal pre-application response and listed in previous sections of this statement.

New Channel

As noted previously, the proposed new channel has been designed to incorporate existing watercourses and create a new natural watercourse which maintains the openness of the area. A number of trees and hedges will need to be removed during the construction of the channel, however these will be replaced with mitigation planting in other areas. The channel is designed with similar geomorphological features to the existing water courses in the area and will behave as a natural river system. The second stage of the channel will be grassed and include grazing areas and new wetland habitats.

There are however a number of necessary structures within the scheme, which although not buildings, may not be classified within any of the exceptions to all new buildings being considered inappropriate.

Bridges and Culverts

The main visible structures will be the new or replacement bridge and culverts. These are all located on existing footpaths and highways which have historically been raised up to allow dry passage across the floodplain, but in doing so also cause flow restrictions. These bridges are critical to reducing flood levels and maintaining existing historic east-west transport links across the floodplain. Seven bridges sites are proposed as follows;

- Replacement Westway cycle path bridge – this extends the existing bridge across the new second stage channel.
- Willow Walk Bridge – this is a new bridge required to maintain a historic, raised access route/bridleway across the floodplain and allow vehicle access along the route for maintenance purposes. Willow Walk is an important commuter route for pedestrians, horses and cyclists.
- North Hinksey Causeway Bridge – this is a new footbridge to cross the new two stage channel
- Bulstake Stream footbridge – this replaces the existing small timber bridge on the Hogacre Ditch with a low level footbridge crossing the new first stage channel only at on the permissive path between North Hinksey and the Thames Path.
- The Devil’s Backbone Bridge – this new bridge maintains the east-west footpath link across the floodplain at South Hinksey. This bridge has been designed to carry vehicles in addition to pedestrians. This provides access for farmers and National Grid across the two stage channel without the need for a second bridge at the existing causeway crossing 200m downstream of the Devil’s Backbone.
- Old Abingdon Road & Kennington Road Bridges – these are new bridges under existing roads to improve flow capacity. These have been located to avoid direct impacts on the existing Standford Culverts Scheduled Monument Culvert sites at Old Abingdon Road.
- A423 Culverts – these are two new large box culverts, one each side of the railway line below the A423 to increase the flow capacity below this road.

The design of new bridges has to be to current standards depending on whether they are bridleways, footpaths, cycleways or have to take maintenance vehicles. Each bridge has been looked at individually and considered.
Willow Walk and the Devil’s Backbone bridges are designed to also carry maintenance and agricultural vehicles, these utilise concrete beams to minimise the depth of beam required for the clear span required. The hand railings have been designed in conjunction with public opinion to provide a modern appearance but utilising traditional materials and colours by including timber elements. The additional verges on the bridges mean we can avoid higher vehicle restraint parapets. These will also have stone cladding to the abutments.

North Hinksey Causeway bridge has been designed with steel main beams to give a long maintenance free design life and keep the deck profile slim. The deck and elements of the parapets are timber to match the rural surroundings.

The Westway Cycle bridge is an existing bridge which will be replaced with a new extended bridge the same width as the existing one to avoid rebuilding the west abutment which is touching an adjacent building. This means the bridge will remain 2m wide as the current bridge and will continue to provide accessibility as at present.

We have designed all bridges to be as sensitive as possible to their setting, with appropriate materials and supporting landscaping further minimising this impact. All the bridges have been subject to an Approval in Principle (AIP) process to ensure the design standards and design life are appropriate. To reduce the visual impact the bridges have been designed to be as low and slender as possible, this has been achieved through the use of steel and pre-stressed concrete beams which allow slender structure components.

The freeboard (air space below the bridge in the event of a flood) has been reduced from the typically expected 600mm to 200mm or 300mm by undertaking specific risk assessments of the likelihood of debris blockages. This has enabled us to minimise the height of the bridges, keeping them as low as possible in the landscape.

The A423 culverts and Bridges at Old Abingdon Road are located in previously developed areas and are designed to be similar in appearance to existing modern bridges in the same locations with concrete components.

Water Management Structures

Aside from bridges there are a few other structures that are required to manage water levels. The system is designed to be passive in operation with the exception of the Eastwyke Ditch control structure. This is a low concrete structure located on the east side of the railway to control the direction of flow in the Eastwyke Ditch. Given its location next to the railway and that its design levels are at the same level as the railway embankment it is not considered to be detrimental to the Green Belt openness.

There are also six other low water level management structures which will help manage water levels and flows during very dry low flow periods to ensure the maximum environmental benefits are derived from the limited water available in the river system at low flows. These are simple narrow fixed crest structures with the top levels below the river bank levels. At higher flows in the channels these will all be submerged and not visible so are not considered to impact the openness.

The scheme will include telemetry monitoring of water levels, which in turn will provide data for the existing flood warning system in Oxford. New telemetry caninets will be installed at Botley Road (Seacourt and Bulstake Stream) and at Abingdon Road (New scheme culvert and Mayweed Bridge).
Flood Walls and Embankments

The proposed raised flood defences will be walls and embankments, which are all located on the fringes of the urban area. Where possible grass covered earth embankments have been used such as the one in South Hinksey where they are located close to the village boundary. Where space is not available for earth embankments then flood walls have been used. This includes areas such as along the property boundaries to the north of Botley Road and through gardens in South Hinksey. This helps with blending into the setting and will not impact the openness of the Green Belt having been designed in all cases to be complementary to the surroundings.

In New Hinksey the embankments have been set back from Abingdon Road, this avoids direct visual impacts on the views from the public footways along the road.

Past Planning Decisions

Having established that the general principle of an engineering operation in the Green Belt is not inappropriate, but that the engineering operation includes a number of structures it is useful to look at a number of other similar applications to see how they were dealt with, and how they were interpreted within the planning decision making process.

The following are examples of these in which proposals were considered to be ‘not inappropriate’ development in the Green Belt.

- **Perry Barr and Witton** - The Perry Barr and Witton scheme is a flood storage area comprising bunds, walls, fences, bridges and a concrete control structure on the River Tame in Birmingham/Sandwell, mainly in the Green Belt. It was considered that proposed works did not represent inappropriate development in the Green Belt as they largely represent engineering works. There was however a large control structure much larger than any we are proposing. This was considered to not be inappropriate given the scale of the scheme. The proposals were considered to largely preserve the openness of the Green Belt and that the proposed engineering works (and associated environmental and ecological enhancements) did not conflict with the purposes of including land in the Green Belt. Therefore, the proposed works were not considered inappropriate works in the Green Belt and add weight to the argument that the principle of the development is acceptable. The report went on to explain that the proposals will act to meet and deliver wider environmental, economic and social objectives. (permission granted 28/9/2017 ref: 2017/04289/PA)

- **Jubilee River** - Flood relief channel near Datchet - Inspector’s report and secretary of state’s decision on the called in planning application 1 March 1995 - This application was determined on the basis of Green Belt policy as set out in PPG2 and that the Inspector regarded the flood channel as appropriate development.

However there are other examples of schemes that were considered to be inappropriate development, but were granted planning consent in the Green Belt as they were able to show that there were VSC as to why they should be given consent:

- **Chelmsford FAS** - A 500 metre long earth or clay embankment, sluice gates and concrete flow control structure, diversion and banking of the watercourse, control building with hardstanding, fencing, lighting and landscaping and access roads. Secondary works to protect nearby houses and railway line. The LPA considered that the works were inappropriate development but planning permission was justified by VSC (planning permission granted 26 February 2013 ref: 12/01320/FUL). These were that the scheme was included in the development plan as a identified scheme and of strategic importance to the city, and as with our proposals the protection of properties was seen to be very important, with the protection of 700 properties.

The grant of planning permission was judicially reviewed by the main affected landowner which failed.
• Croston Lancashire - earth embankment, ancillary control structures and infrastructure, a new permanent access road and borrow pits on the River Yarrow – The LPA considered that the scheme works were inappropriate development but flood risk reduction issues, along with addressing climate change, landscape/habitat creation, long term flood protection of conservation area and listed buildings and protection of the road infrastructure amounted to VSC to justify a grant of planning permission (21 January 2015 ref: 14/01046/FULMAJ). A number of these VSC are very similar to ours. The protection afforded by our scheme will however protect a significantly higher number of properties. There were no individual VSCs but the sum of all the positive aspects of the scheme was considered to amount to such.

From the examples that we have set out, there is an even split between those that are considered not inappropriate and those that are inappropriate but have shown VSC exist as a result of the flood reduction element that the schemes deliver.

Taking all of this into account, there is an argument that can be had to show that the development is not inappropriate and therefore we would need to justify the scheme in terms of preserving the openness of the Green Belt and not conflicting with the purposes of including land within the Green Belt.

However, taking on board the feedback from the pre-planning process, the more robust approach given the pre-application comments and case studies for other similar schemes outlined above would be to consider the structures to be inappropriate development, but that clearly demonstrates VSC to justify them in the wider regional benefits of the scheme.

6.6 The test for Very Special Circumstances

Given that we have decided to take the more robust approach to justifying the scheme within the Green Belt we need to demonstrate VSC. The test for a VSC case is that it must demonstrate that “the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations” according to the NPPF Paragraph 88.

The sections that follow set out the harm by way of inappropriateness, any other harm, and the VSC that exist.

6.6.1 Harm by way of inappropriateness

The fundamental aim of Green Belts according to the NPPF is to “prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.”

Despite the overarching development proposals being an engineering operation, there are a number of structures within the scheme as detailed elsewhere in this statement. As such it is not the principle of the development as a whole that needs to be considered when reviewing harm by way of inappropriateness, but the structures which form part of it.

Preventing Urban Sprawl by keeping land permanently open

The Oxford FAS does not include any development that could be considered to be of a quantum that would suggest any urbanisation or spread of the urban area into the Green Belt. The use of the land as a flood alleviation scheme is critical to delivery of the flood risk management benefits and actually results in ensuring that the whole area of land is unsuitable for any development, encroachment or urban sprawl once it is in place.

Whilst a number of structures are required in order to maintain access and to allow the scheme to function properly, they do not threaten the overall impression of the land as a distinct break between the built development of the city of Oxford and the adjoining countryside. The structures have also been designed to be low profile to avoid impacting on the views of the Oxford skyline from the west.
Maintaining the openness of the Green Belt

The Oxford FAS will have an impact on the openness of the Green Belt, but this is kept to the minimum. The details of the nature of the proposed scheme in relation to the openness of the surrounding area is discussed in the previous section of this statement.

The majority of the structures within the scheme and in the Green Belt are bridges and raised defences as set out earlier in this statement. The bridges are necessary to maintain access over the new channel along the existing raised transport routes and are therefore essential to the delivery of the scheme.

The previous section of this statement, 1.6, outlines the numbers and design features for the bridges. As presented we have tried to design the bridges in a sympathetic manner and keep them as slim and low profile as possible given their intended usage and current design standards. Where possible some deviation from standards has been achieved to help minimise impacts. Materials have been chosen to provide a minimal vertical profile whilst achieving the required 120 year design life of the bridges. Where possible they are also in keeping with the surrounding landscape character including features such as timber rails and stone cladding. Overall the designs have been focused on minimising the visual impacts on the openness of the Green Belt area.

The flood bunds and walls are located on the peripheries of the scheme and located as close to the built-up areas which are being protected as possible. Where possible grass covered earth embankments have been used for example in South Hinksey where they are located close to the village boundary. Where space is not available for earth embankments then flood walls have been used. This includes areas such as along the property boundaries to the north of Botley Road and through gardens in South Hinksey. This has minimal impact on the openness of the area. The finishes to the flood walls will be in keeping with the surrounding landscape character.

In New Hinksey the embankments have been set back from Abingdon Road to avoid direct visual impacts on the views from the public footways along the road.

Given their location and design the raised defences are not considered to have an impact on the openness of the area. As noted the walls are at the edge of the developed area and are in keeping with their surroundings. The bunds will have even less impact on the openness of the area as they will be constructed and landscaped as far as possible to look like natural features, and will not be immediately identifiable to the casual observer as part of a flood alleviation scheme.

The other structures proposed relate directly to the function of the scheme. The control structures, will be set within streams and ditches and therefore will not impact on openness as they are set below the general level and lie of the land. The Eastwyke Ditch control structure is located next to the east side of the railway and will not be visible over the railway embankment.

As discussed in the previous section of this statement it is not considered the scheme will impact on the overall openness of the area. The landscape and visual amenity section included within the ES in relation to the Green Belt concludes that:

“The changes to the above-ground flood protection elements (flood embankments, flood walls bridges and telemetry cabinets) will have a localised visual effect, but would not have an adverse effect on wider views from the river corridor or from the Protected Viewcone locations to the west of Oxford. Mitigation in the form of sensitive bridge design and choice of materials, design of the earthworks and planting scheme sympathetic to the existing landscape character would be effective in mimising the visual impact on the Green Belt and maintaining its openness.”

Permanence of the Green Belt

The permanence of the Green Belt is closely related to preventing urban sprawl by keeping land open and maintaining the openness of the Green Belt. The use of the land as part of a flood alleviation scheme is critical to the delivery of the flood risk benefits and supports and reinforces the permanence of the Green Belt because it is required to remain open and undeveloped in order for the scheme to operate. The scheme promotes the creation of a new natural river channel with new habitats and
promotes maintaining existing farming practices in the area, helping to retain the character of the Green Belt into the future. The area will be at risk of flooding as it is designed to be. Planning policy therefore also helps to maintain the permanence of the Green Belt by not allowing a wide ranging type of developments to be located in areas at such a risk.

Of the five purposes of the Green Belt set out in the NPPF, the first four are most pertinent to our application. As mentioned previously in this statement the proposed scheme helps support these four purposes in that it checks urban sprawl, prevents towns and villages merging, helps safeguard the countryside from encroachment and helps to safeguard the setting of the area. The nature of the scheme is that the land remains open and remains part of the floodplain with no significant development on it.

The structures required are essential for the function of the scheme to protect properties from flooding and are designed to be sympathetic to the landscape, and will be in keeping with the setting of the area. The scheme will retain the openness of the landscape and any structures we are proposing will not add to the sprawl of any surrounding development or be considered to join neighbouring towns in any way. In fact, the scheme helps to reinforce the Green Belt designation to the West of Oxford, as the flood alleviation scheme is reliant upon the full use of the local floodplain within the scheme boundary, thus safeguarding the area, preserving its openness and protecting the countryside from encroachment.

6.6.2 Any other Harm

There are a number of constraints that the design of the scheme has to address in order to deliver proposals that are not only fit for purpose in terms of flood alleviation, but are sympathetic to the surroundings and the context of the location. The Environmental Statement considers the scheme against a whole range of environmental receptors and the potential harm which our proposals may cause to them. The scheme has however been designed in order to reduce the impact of proposals and reduce any harm which they may cause. Where this has not been possible in the primary design of the scheme mitigation has been proposed to reduce these impacts. This will include replacement tree planting and the creation of wetland and other terrestrial habitats. Specific long term mitigation plans are in place for the creation of new MG4 grassland to try and compensate for the damage caused in Hinksey Meadows. This will help preserve the traditional farming practices in the area which will help benefit the preservation of the Green Belt.

A full explanation of the mitigation what has taken place to alleviate as far as possible any negative impacts of the scheme is set out in the Environmental Statement.

In terms of primary mitigation, where new flood defences are required, these have been sensitively designed to minimise impacts on landscape and visual receptors and to integrate proposals with the baseline landscape.

The Scheme has been designed through an iterative process to minimise the loss of landscape features of high value such as MG4 grassland, mature trees and the land take required to fulfil its objectives. Where ever possible existing vegetation within the boundary of the Scheme will be retained in order to integrate proposals to the greatest extent possible with that of baseline conditions.

The Court of Appeal decision in 2014 in relation to Redhill Aerodrome provided clarity as to how the issue of ‘harm’, in the context of development within the Green Belt, should be considered under the NPPF. In practical terms this means that Planning Authorities should take account of all planning matters when considering VSCs, not just those relating to the Green Belt, and also, in weighing up whether VSCs exist, an authority can consider the cumulative effect of individual impacts. This is regardless of whether or not they are considered harmful to the Green Belt as individual considerations.

This case adds weight to our justification when considering VSC. Aside from the flood protection afforded by the OFAS, there are a large number of benefits, which, as a cumulative impact adds weight to the flood protection being considered VSC and may indeed on their own constitute VSC.
6.6.3 Other considerations

As set out previously, the scheme could be considered as not inappropriate development as in the case in a number of similar schemes. However given that schemes of this type are sometimes considered to be inappropriate, and the pre-application comments received we have followed what we consider to be a robust approach and are therefore having to demonstrate that there are other considerations which clearly outweigh the potential harm to the Green Belt by reason of inappropriateness, and any other harm, that should result in our proposals being granted planning consent.

We have set out a commentary of the potential harm to the Green Belt earlier in this chapter, as well as any other harm that the proposals may cause. Whilst those impacts have as far as possible been designed out, or mitigated, the following considerations exist that clearly outweigh any of these residual impacts that remain.

Delivery of Oxford Flood Alleviation Scheme – In a number of other schemes, the flood alleviation benefits element of proposals have been considered enough to demonstrate VSC.

The purpose of the scheme is to manage the flood risk to Oxford over the next 100 years, reducing the frequency of flooding by creating more space for water within the existing western floodplain of the city. The scheme addresses flooding from the main channel of the River Thames and from the Hinksey and Bulstake Streams. If nothing was done to manage flood risk, approximately 2,500 properties would be at risk in a flood that has a 1 in 100 (1%) annual risk of occurring. The Environment Agency’s existing flood management activities reduces this but around 1,500 properties still remain at risk. This proposal will reduce the likelihood of flooding for all of these properties, with over 1,200 benefiting from a standard of protection greater than a 1 in 100 (1%) annual risk of flooding on opening. If we don’t take action the impacts of climate change means that 3,431 properties will be at flood risk in 50 years’ time in the same event. This threat of climate change will not only increase the extent of flooding, but its frequency and disruption to the city.

Flooding within Oxford also causes transport disruption, with frequent closure of the railway line and main roads to the west (Botley Road) and the south (Abingdon Road) of the city. These roads are important for access to the city by cars, buses (including Park and Ride) and bicycles. The scheme will also offer greater resilience to important utilities such as the sewer network, electricity sub-stations and broadband communications.

The results of the detailed design modelling done for the scheme show that all properties in Oxford that are currently at risk of flooding from the River Thames, will have their flood risk reduced when the scheme is in place.

Economic Benefits – In the absence of the Scheme, there will be a continued risk of flooding to local businesses, tourism and the local community in Oxford, which will increase due to the effects of climate change. These effects will be exacerbated by urban development associated with the increasing population and in-commuting to the city. This will include increased flood risk for approximately 3,400 residential and commercial properties, and tourist and recreational assets over the next 100 years. The implementation of the scheme will provide resilience and certainty to the City, resulting in less disruption due to property damage for both residents and businesses. It will also lead to a reduction in associated insurance costs. Businesses will be able to remain open for longer during flood events with less disruption to their operations. The reduction of flood risk to transport links will result in less disruption to travel, including tourism and commuters, and the operation of businesses. This will create more willingness to locate local and national businesses and residential development in the Oxford area. The reduction of flood risk to the railway line will also have national benefits to areas outside of Oxford which are currently affected due to trains not being able to pass through the Oxford area.

Environmental Improvements - Creation of new and/or improved habitat for flora, fauna and fisheries, where it does not compromise flood defence or other environmental receptors. This habitat creation/restoration forms part of the integrated design of the Scheme to help mitigate habitat losses,
to meet Water Framework Directive (WFD) measures and support England Biodiversity 2020 requirements/habitat creation targets e.g. new wetland habitat within the footprint of the second stage channel, new channel connecting the Bulstake and Hinksey Streams, in-channel habitat improvements including scrapes and backwaters.

**Preservation of the Green Belt** – The use of the land in the Green Belt as part of a flood alleviation scheme will preserve the use of the land and prevent development, restricting sprawl and preventing development from encroaching into the area. The flood alleviation scheme is designed to use the full extent of the natural floodplain to draw water away from the developed areas of Oxford during flood events. The utilisation of this floodplain is critical to the operation of the scheme. As a result the scheme brings new purpose to the floodplain as it becomes part of Oxford’s active flood management for significant flood events into the future, providing even greater permanence to the Green Belt.

**Improved Access to the Green Belt** – Whilst there will not be any additional public rights of way included in proposals, the scheme will help to improve and upgrade a number of the existing east-west sustainable transport links for walkers and cyclists through the floodplain. These links are important transport and commuter routes and provide easy access to the city centre for walkers and cyclists from the Botley, North Hinksey and South Hinksey villages. This is turn helps reduce the number of vehicles on the Botley Road and improves local air quality and in turn, have positive health implications.

This area will also continue to be an attractive location for leisure walkers and cyclists on the existing routes. The new variety of wetland habitats are anticipated to indirectly promote biodiversity in the area which in turn could help increase leisure usage of the footpaths.

**Improved access to Oxford** - A long-term reduction in flood risk to critical transport infrastructure including key arterial roads such as the Botley and Abingdon Roads and the railway line through the city, that is required to link new developments with the commercial hub of Oxford. The reduction of flood risk to transport links will result in less disruption to both leisure and business travel. The reduction of flood risk to the railway line will also have national benefits to areas outside of Oxford which are currently affected due to trains not being able to pass through the Oxford area.

**Health** – In the absence of the Scheme, local community assets, businesses and access routes for commuting and travelling in and around the city will continue to be vulnerable to flooding, which will have significant adverse effects on human health. These effects will be exacerbated by climate change, which will increase the extent, severity and frequency of flooding. The increasing population growth and in-commuting to Oxford city will place increasing strain on existing resources vulnerable to flooding.

The Scheme will provide some significant health and well-being benefits that have been developed and promoted as an integral part of the Scheme by:

- Landscape and wildlife enhancements through the creation of a new natural looking channel and increased blue infrastructure;
- Improvements to green infrastructure by improving the surfacing of existing public footpaths; and
- Creation of new amenity features through the installation of interpretation boards around the Old Abingdon Road Scheduled Monument

The mental and physical health of residents and visitors to Oxford will be improved by the scheme. There will be less stress and anxiety with a greater confidence that properties and businesses are at less risk from flooding. The improvements to the outdoor environment, particularly in terms of improvements to footpaths and cycleways will improve both physical and mental health providing greater attraction to exercise in the area. The reduction in flood risk to critical infrastructure in Oxford will significantly reduce stress and anxiety for vehicle travellers and those in-commuting, and is a major beneficial impact of the Scheme, influencing key indicators of health and fitness.
Need - It is important to consider how to weigh ‘need’ when considering VSC. In R (Cherkley) v. Mole Valley DC [2014] EWCA Civ 567 the proposed development was for a golf club and hotel in Surrey. The site was in the Green Belt and there were AONB concerns. The case made to establish VSC was simply that the demand for a golf course and hotel were enough to amount to need which equated to VSC. The Court of Appeal said “It seems to me, however, that in holding that [the judge at first instance] required applicants to demonstrate that further golf facilities were “‘necessary’ in this part of Surrey in the interests of the public and the community as a whole” he adopted an unduly exacting and narrow interpretation of that statement. The word “need” is capable of encompassing necessity at one end of the spectrum and demand or desire at the other. Overall I take the view that if any need requirement is to be read into the policy, “need” is to be understood in a broad sense so that the requirement is capable of being met by establishing the existence of a demand for the proposed type of facility which is not being met by existing facilities.

In the case of OFAS we consider there to be a “need” for improved flood risk management in the Oxford area. This is demonstrated by the frequency of flooding and has been confirmed by the support from the public and affected residents provided during public drop in sessions held during the development of the scheme, these are described further in the Statement of Community Involvement which is included in the planning application. A whole range of flood risk management options was reviewed at the strategy stage of the project and the proposed scheme put forward has been refined from the recommendations of the published strategy.

6.7 Green Belt Conclusions

Schemes of this type have been considered to be both not inappropriate and inappropriate development in the Green Belt. Following pre-application advice received, and the need to justify the scheme in the strongest possible manner we have taken the most robust approach and decided to demonstrate that VSC exist that outweigh harm to the Green Belt and any other harm. The Cherkley case provides case law to add weight that a need and demand for the flood alleviation scheme can amount to VSC, that is not withstanding the other significant benefits and VSC that the proposals would bring as set out in this chapter.

We consider the flood protection afforded by the proposals in itself comprises VSC, and this has been the case on other schemes. In addition, a number of other factors, may, when combined together, amount to VSC. The level of flood protection, alongside the other benefits as a sum total should be considered to outweigh any harm.

There is minimal harm to the Green Belt that will be caused by the proposals. Much consideration has been given to the design of the structures within it, which are either required for the function of the flood alleviation scheme or dictated to us as a result of the current design standards.

Any other harm that would occur as a result of the proposals has been designed out or mitigation provided where possible.

We believe that the OFAS brings undoubtedly a significant benefit to the area, reducing flood risk for over around 1,500 properties, as well as substantial social, economic and environmental positive impacts whilst at the same time protecting critical Green Belt and floodplain from further development which meets the NPPFs requirement to demonstrate VSC outweighing harm to the Green Belt and any other harm.

Taking all these issues into consideration we consider the proposals for the scheme as a whole to be suitable for construction in their proposed locations and in their proposed form given the VSC that exist.
SECTION 7

Key Challenges and Constraints

7.1 Introduction

The design of any flood alleviation scheme requires consideration of multiple technical, environmental and land-use constraints. It is common for there to be some tension between engineering, social and environmental objectives.

The key challenges the OFAS faces are listed in this section. The Environmental Statement explains how each issue has been addressed in terms of effects and mitigation at design stage, and any other mitigation required to reduce impacts where possible, taking into account the various legal, operational and environmental requirements that apply, whilst also reflecting stakeholder and public aspirations. The policy analysis in Section 5 of this statement reflects the consideration that has been given to the national and local policies relevant to this development proposal. The challenges include the following -

- Consideration of existing services and infrastructure, such as utilities, footpaths, roads and railways. Ensuring that disruption to core services and transport routes into and around Oxford is kept to a minimum.
- Landowner requirements, existing and future land use.
- Maintaining public access (footpaths, cycleways, bridleways) throughout the scheme area both during and following construction, keeping disruption to a minimum.
- Landscape and visual impacts of the scheme which needs to respect and enhance the local landscape character with careful siting and design of any structures.
- The management of materials excavated as part of the scheme construction process and the associated movement of material from the site and consequent effects.
- Significant archaeological sensitivities including the need for the channel/culverts across the Old Abingdon Road which is a medieval causeway and has a group of culverts designated as a Scheduled Ancient Monument.
- Protecting areas of ecologically rich habitats/species, most notably the MG4a classified grassland in Hinksey Meadows. Requiring significant protection during construction and careful design to ensure ground conditions continue to support the habitat.
- The presence of protected species within the scheme area including badgers, bats, great crested newts, reptiles, dormice, water voles, otters and breeding birds which have influenced the design of the scheme and the mitigation proposals.
- The geology of the scheme area which means that there are gravels present.
- The Green Belt policy designation and how the scheme fits within this designation and will continue to achieve the aims of the Green Belt.

Our Statement of Community Involvement details the consultation and engagement we have undertaken with the general community, landowners and environmental stakeholders and how the scheme has evolved during design to respond to key issues raised which also relate to some of these challenges.
The proposals need to address these key challenges whilst complying with both national and local policies, providing significant benefits in terms of reducing flood risk as well as other tangible social, economic and environmental improvements to the local environment.

The following summarises our response to these challenges and we explain how, through our proposal we have mitigated these.

7.2 Green Belt

The scheme is located within Oxford’s Green Belt and the proposal has been assessed in line with national and local planning policy. This is detailed in our Green Belt Statement in Section 6.

Protecting the aim and five purposes of the Green Belt is important for any proposal in this location. Our scheme complies with the overarching aim of the Green Belt and is in line with the five purposes.

We have demonstrated the Very Special Circumstances of the scheme through the consideration of harm of the proposal and the benefits provided by the delivery of significant flood risk reduction to over 1,200 properties as well as reducing transport disruption, and economic benefits to local businesses and tourism.

7.3 Flood Risk

The purpose of the scheme is to manage the flood risk to Oxford over the next 100 years, to reduced flood risk for over 1,500 properties in Oxford with over 1,200 benefiting from a standard of protection greater than a 1 in 100 (1%) annual risk of flooding on opening.. The proposal is in compliance with the NPPF’s policy on development and flood risk and the application is supported by a Flood Risk Assessment and hydraulic modelling. The evidence demonstrates that the proposal will not increase flood risk to additional properties in the surrounding areas and during the design process this was supported by an independent review of the flood modelling commissioned by the Vale of White Horse District Council. A Flood Risk Assessment is submitted in support of the application.

7.4 Archaeology

Significant archaeological investigations have been carried out to fully understand the archaeological history and profile of the area and to comply with both national and local planning policies. This work has been progressed in consultation with Historic England and the archaeology officers from Oxfordshire County Council and Oxford City Council. It has included a Desk Based Assessment of the area, bespoke and reactive geo-archaeological surveys, geophysical surveys, an archaeological evaluation on Old Abingdon Road and an extensive trial trenching exercise. During the investigations some areas of interest were found but no significant previously unknown features were identified, these are will be investigated further once construction begins on site and we will work closely with the City and County Archaeologists.

The causeway under Old Abingdon Road with the Scheduled Ancient Monument has been a focus of investigation during the design of the scheme. We engaged in detailed consultation with Historic England and the Local Councils’ archaeology officers regarding the possible routes for the new flood channel, which is outlined in the Statement of Community Involvement. To ensure that harm to the scheduled ancient monument and the medieval causeway is kept to a minimum the route of the flood channel ‘doglegs’ to the west of the culverts. The options appraisal of the two routes is given in the ES. Although the new channel will impact the causeway, it avoids the Scheduled Ancient Monument whilst providing considerable benefit to the public by reducing the risk of flooding to over 1200 properties in Oxford. In addition local vegetation clearance and the creation of the new channel
will enable the culverts to be more prominently seen, increasing the public awareness of these important assets and their links to the history of Oxford.

### 7.5 Local environment and ecological features

As outlined in Section 4 there are many protected species present within the scheme area as well as international, national and locally designated sites. We have undertaken thorough survey work in accordance with national and local planning policy. We have consulted and worked with local stakeholders and experts in order to comply with these policy requirements and adapting the scheme design to protect and enhance the biodiversity of the area. These surveys and discussions have informed the design and route of our channel, most notably in Hinksey Meadow where the channel route now seeks to avoid, as much as possible, the rare MG4a grassland and creeping marshwort.

The scheme maintains and creates a balance of habitat that reflects and enhances the existing biodiversity present within this floodplain area. As part of the scheme mitigation planting areas are proposed to replace trees unavoidably lost and to provide new habitat areas.

The scheme as a whole will provide a net gain in habitats which is confirmed in the ES.

### 7.6 Landscape and Visual Impact

The location of the proposal within the low lying area of floodplain and Green Belt, and close to the historic city of Oxford means that the landscaping of the scheme and visual impact of development is an important consideration.

Our proposal respects the local landscape character with the channel having minimal visual impact and enhancing the currently grazed landscape with the creation of an attractive winding channel and associated new wetland habitat. Flood walls and embankments are located on the edges of the settlements, avoiding the disruption of views and maintaining the openness of the area. In addition to this, new areas of habitat are being proposed to replicate or enhance existing local habitats, appropriately matching the current density and height of vegetation to not distract but enhance the setting. The ES includes a Landscape and Visual Impact Assessment which concludes that in the long-term, the landscape and ecological design of the new channel will enhance the experience of walking, cycling, riding or boating in the area.

### 7.7 Mineral Extraction

River terrace deposits (gravels) will be excavated as a by-product of the construction of the OFAS. The first stage channel will be constructed to a depth which requires the removal of some gravels and the anticipated amount is outlined in the Materials Management Plan. These gravels will be used on site in the construction of the scheme providing gravels required for the new channel bed, and the low flow weirs, and other environmental features within the channel. If we were not able to use the gravel excavated from the scheme we would need to import gravels to the site in order to construct these features. Any surplus gravel from our site will be used in other local Environment Agency projects as required.

As outlined in our policy assessment, the location of the proposed scheme is not designated as either a Mineral Strategic Resource Area or a Mineral Safeguarding Area within the Oxfordshire Minerals and Waste Core Strategy, 2017 (Oxfordshire County Council). We are not proposing future works to extract any of the remaining minerals.

We have explored the opportunities for sand and gravel extraction as part of the scheme but this was discounted following a more detailed assessment on the volume of gravels that could be extracted,
the constraints of the site, and the technical feasibility and viability of the options. This is explained in more detail in the Materials Management Plan.

The construction of the scheme will not sterilise the potential for future extraction of minerals remaining within the scheme area, although careful consideration would need to be given to the impact of any proposals for future extractions on the functionality of the OFAS, as well as on the Green Belt and floodplain as a whole.

### 7.8 Transport and Air Quality

The scheme is located at the heart of a complex transport network for trains, cars, pedestrians, cyclists and horses.

The proposed development will not introduce any new routes for cars, pedestrians or cyclists, only reinstate the level of accessibility previously existing, plus facilitating landowners’ access to parcels of land that will be fragmented by the channel. Some footpaths and cycleways will be improved to current standards as part of their reinstatement. The potential for increased accessibility was explored during early consultation and is outlined in the Statement of Community Involvement.

In terms of impact during construction, vehicles will be using the A34 to transport material from site resulting in a minimal impact. We will work closely with the County Council and Highways England to reduce the likelihood of increased congestion during the construction period. We have consulted with Highways England and will implement their recommendations in the draft CTMP as outlined in the ES. In consultation with Oxfordshire County Council and Highways England we have placed restrictions on use of minor road networks during construction to reduce local traffic impact.

Our air quality modelling shows that even during construction the impact will not be detrimental to local air quality. As part of our pre-application discussions with the Councils’ Air Quality officers we have agreed an additional six months of monitoring prior to construction and during construction. This will set the context for our Construction Traffic Management Plan.
Conclusion

8.1 Conclusion

The proposed scheme will reduce the risk of flooding for around 1,500 properties and key infrastructure, and is therefore consistent with the aims and objectives of the relevant Development Plans, as well as national planning policy.

The proposals have fully considered the key policy controls and would continue to adhere to any restrictions or planning guidance throughout the design and build process. Particular reference has been paid to the impact of the proposed scheme on landscape and habitats.

There are a number of natural and historic assets in the area that have been given considerable weight when designing the scheme in order to ensure that they are protected and/or mitigated where appropriate. The most pertinent example is OAR, where due to the high value and scheduled status of the culverts, alternative alignments for the scheme were considered, and we made the decision to avoid them completely.

The development of our proposals in the Green Belt can be justified and as such we have provided a Green Belt Statement in Section 6 of this document which sets out the Very Special Circumstances that exist.

Building the Scheme will cause temporary disruption to the local community, as well as to wildlife and other environmental features. We anticipate that the disruption will last from Winter 2018 until 2021. Extensive and permanent vegetation loss will result, although woodland, meadow grassland and wetland habitat will be created elsewhere to offset and enhance resulting in a net gain in habitat. Through consultation and by undertaking an Environmental Impact Assessment, we have sought to avoid or minimise these impacts to an acceptable level.

Overall the flood alleviation scheme is in compliance with policy and is expected to bring significant long-term benefits to Oxford by reducing the risk of flooding to large areas of the city containing housing, businesses, transport links, public spaces and areas of high historic and amenity heritage value. The multi-beneficial Scheme will reduce flood risk to people, property and the environment but also maximises opportunities for biodiversity to deliver a net gain in habitats, improved landscapes and secures the area as an accessible green space for the local community.