Environmental Impact Assessment Scoping Opinion Report

Adopted under Regulation 15 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017 (Statutory Instrument 2017 No.571)

Proposed Scheme

River Thames Capacity Improvements & Flood Channel Project

Construction of 3 no. flood alleviation channels & associated flood management structures & infrastructure on land situated in the Royal Borough of Windsor & Maidenhead (RBWM), & the Runnymede Borough Council (RBC) & Spelthorne Borough Council (SBC) areas; widening of the Desborough Cut within the Elmbridge Borough Council (EBC) area; the improvement or construction o 3 no. weirs, within the EBC area & the London Borough of Richmond-upon-Thames (LBRuT); construction of a flood storage area within the LBRuT area; construction & operation of 4 no. visitor centres & 4 no. car parks (RBWM, RBC & SBC); the construction & operation of up to 7 no. temporary materials processing sites (RBWM, RBC & SBC); the construction & use of up to 4 permanent compounds (RBWM, RBC, SBC) & up to 13 no. temporary compounds (RBWM, RBC, SBC, EBC, LBRuT); development of up to 6 no. 'landscape enhancement areas' (RBWM, RBC, SBC); development of up to 11 no. 'habitat creation areas' (RBWM, RBC, SBC, EBC, LBRuT); & creation of up to 19 km of new public access paths & cycleways (RBWM, RBC, SBC)

Proponent Organisation

Environment Agency

Planning Authorities

Royal Borough of Windsor & Maidenhead
Elmbridge Borough Council
Runnymede Borough Council
Spelthorne Borough Council
London Borough of Richmond-upon-Thames
Royal Borough of Kingston-upon-Thames

September 2017

Statement of Purpose

This report has been prepared by Surrey County Council, on behalf of the following planning authorities: Royal Borough of Windsor & Maidenhead, Elmbridge Borough Council, Runnymede Borough Council, Spelthorne Borough Council, the London Borough of Richmond-upon-Thames, and the Royal Borough of Kingston-upon-Thames. Surrey County Council's advice is set out in a separate comparable report.

The report has been prepared in response to a formal request for a Scoping Opinion. The report sets out the advice of the relevant planning authorities on the matters to be covered in the Environmental Statements that would need to be submitted alongside any future applications for planning permission made in respect of components of the development to which the request for a scoping opinion relates.

This report has been prepared in accordance with the requirements set out in Regulation 15 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017 (Statutory Instrument 2017 No.571).

The advice set out in the main body of this report takes account of the comments received from the organisations, including the statutory consultees, consulted as part of the scoping exercise by Surrey County Council. The comments of the consultees are presented in full in Appendix A to this report.

The preparation of this Report was undertaken in August and September 2017.

Comments from additional consultees requested by the London Borough of Richmond upon Thames after this Report's preparation are included within an addendum to Appendix A.

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Appendices

List of Acronyms & Abbreviations

AEP	Annual Event Probability
AGLV	Area of Great Landscape Value
AHAP	Area of High Archaeological Potential
AONB	Area of Outstanding Natural Beauty
AQMA	Air Quality Management Area
BOA	Biodiversity Opportunity Area
BS	British Standard
CIEEM	Chartered Institute of Ecology & Environmental Management
CRTN	Calculation of Road Traffic Noise
DMRB	Design Manual for Roads & Bridges
EIA	Environmental Impact Assessment
ES	Environmental Statement
FRA	Flood Risk Assessment
IAQM	Institute of Air Quality Management
IEMA	Institute of Environmental Management & Assessment
LCA	Local Character Assessment
LNR	Local Nature Reserve
LVIA	Landscape & Visual Impact Assessment
NCA	National Character Assessment
NPPF	National Planning Policy Framework
NSR	Noise sensitive receptor
SNCI	Site of Nature Conservation Importance
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
TA	Transport Assessment
WFD	Water Framework Directive

Section 1: Introduction & Background to the Scoping Opinion

1.A Background to the Scoping Opinion

1.1 On 19 June 2017, GBV JV Ltd, acting on behalf of the Environment Agency, submitted requests for a scoping opinion under Regulation 15 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017 (Statutory Instrument 2017 No. 571) (the EIA Regulations) to the seven planning authorities listed below.

- The Royal Borough of Windsor & Maidenhead;
- Runnymede Borough Council;
- Spelthorne Borough Council;
- Elmbridge Borough Council;
- Surrey County Council;
- The London Borough of Richmond-upon-Thames;
- The Royal Borough of Kingston-upon-Thames.

1.2 The scoping opinion request was made in respect of a proposal to construct a flood alleviation scheme for the section of the River Thames that extends from Datchet (in the Royal Borough of Windsor & Maidenhead) in the west to Teddington Lock (in the London Borough of Richmond-upon-Thames) in the east. This scoping opinion report has been prepared by Surrey County Council, acting on behalf of the relevant planning authorities, in response to the scoping opinion requests. This report should be read in conjunction with the scoping opinion request report submitted by the proponent.

1.3 In summary the River Thames capacity improvement and flood channel project, as described in the *Draft Environmental Impact Assessment Scoping Report for Consultation* (June 2017, GBV JV Ltd for the Environment Agency), would involve the following development:

- Construction of 3 no. flood alleviation channels and associated flood management structures and infrastructure on land situated in the Royal Borough of Windsor & Maidenhead (RBWM), the Runnymede Borough Council (RBC) area, and the Spelthorne Borough Council (SBC) area;
- Widening of the Desborough Cut within the Elmbridge Borough Council (EBC) area;
- The improvement or construction of 3 no. weirs, within the EBC area and the London Borough of Richmond-upon-Thames (LBRuT) area;
- Construction of a flood storage area within the LBRuT area;

- Construction and operation of 4 no. visitor centres and 4 no. car parks, to be located within the RBWM (2 no. centres and 2 no. car parks), the RBC (1 no. centre and 1 no. car park) and the SBC (1 no. centre and 1 no. car park) areas;
- Construction and operation of up to 7 no. temporary materials processing sites, to be located within the RBWM (3 no. sites), the RBC (2 no. sites), and the SBC (2 no. sites) areas;
- Construction and use of up to 4 permanent compounds, to be located within the RBWM (1 no. compound), the RBC (2 no. compounds), and the SBC (1 no. compound) areas;
- Construction and use of up to 13 no. temporary compounds, to be located within the RBWM (5 no. compounds), the RBC (2 no. compounds), the SBC (3 no. compounds), the EBC (1 no. compound), and the LBRuT (2 no. compounds) areas;
- Development of up to 6 no. 'landscape enhancement areas', to be located within the RBWM (3 no. areas), the RBC (2 no. areas), and the SBC (1 no. area) areas;
- Development of up to 11 no. 'habitat creation areas', to be located within the RBWM (3 no. areas), the RBC (4 no. areas), the SBC (2 no. areas), the EBC (1 no. area), and the LBRuT (1 no. area) areas;
- Creation of up to 19 kilometres of new public access paths and cycleways, to be located within the RBWM (8.14 kilometres), the RBC (5.13 kilometres), and the SBC (5.65 kilometres) areas.

1.4 Before adopting a Scoping Opinion the relevant planning authorities must take into account the information specified in Regulation 15(6) of the EIA Regulations.

> *(a) any information provided by the applicant about the proposed development;*
>
> *(b) the specific characteristics of the particular development;*
>
> *(c) the specific characteristics of development of the type concerned; &*
>
> *(d) the environmental features likely to be significantly affected by the development.*

1.5 This Scoping Opinion sets out the information that the relevant planning authorities consider should be included in the environmental statements that are submitted with the applications made in respect of the proposed scheme of development. In formulating this Scoping Opinion the relevant planning authorities have taken account of, the requirements of the EIA Regulations, the nature and scale of the proposed development, the nature of the receiving environment, current best practice in the preparation of environmental statements, and the views expressed by the organisations and bodies that responded to the consultation.

1.6 This Scoping Opinion should not be construed as implying that the relevant planning authorities, collectively or individually, agree with the information or comments provided by the proponent in their request for a Scoping Opinion. In particular, comments from the relevant planning authorities in this Scoping Opinion are without prejudice to any decisions subsequently taken in respect of any planning applications submitted in respect of the proposed scheme of development.

1.7 The relevant planning authorities are of the view that the information provided by the proponent when requesting this Scoping Opinion meets the requirements of Regulation 15(2)(a) of the EIA Regulations.

> *(a) In relation to an application for planning permission:*
>
> *(i) A plan sufficient to identify the land;*
>
> *(ii) A brief description of the nature & purpose of the development, including its location & technical capacity;*
>
> *(iii) An explanation of the likely significant effects of the development on the environment; &*
>
> *(iv) Such other information or representations as the person making the request may wish to provide or make.*

1.B Consultation on the Proposed Scope of the EIA

1.8 The relevant planning authorities have a duty under Regulation 15(4) of the EIA Regulations to consult before adopting a Scoping Opinion. A full list of the consultation bodies, and their responses, to which the proponent should refer in undertaking the EIA, is provided at Appendix A.

1.9 The submitted environmental statements should reflect the points raised by the consultation bodies. It is recommended that a table is provided in each of the environmental statements, summarising the scoping responses from the consultation bodies and how they are, or are not, addressed. Where the recommendations of the consultation bodies have not been incorporated into the scope of the EIA a justification for their omission should be provided in each of the environmental statements.

1.10 Any consultation responses received after the stated deadline for receipt of comments have not been taken into account within this Scoping Opinion. Late responses will, however be forwarded to the proponent, and should be given due consideration in the EIA process.

1.C Structure of the Scoping Opinion Report

1.11 This scoping opinion report is structured as follows:

- Section 1:Introduction and background to the EIA scoping opinion;
- Section 2: The proposed developments and sites;
- Section 3: General advice on the presentation and content of the Environmental Statements;
- Section 4: Specific advice on the technical content of the Environmental Statements;

1.12 The scoping opinion report is accompanied by the following Appendices:

- Appendix A: Organisations and Bodies Consulted, and Register of Responses.
- Appendix B: Requirements of Regulation 18 and Schedule 4 of the EIA Regulations.
- Appendix C: Description of the proposed development – compiled by Surrey County Council on the basis of the information provided in the *Draft Environmental Impact Assessment Scoping Report for Consultation* (June 2017, GBV JV Ltd for the Environment Agency).

Section 2: The Proposed Developments & Sites

2.A Introduction

2.1 The following sections provide a summary of the information provided by the proponent in their scoping opinion request report in respect of the proposed scheme of development, and the areas of land that would be affected. The information provided has not been verified by the relevant planning authorities, and for the purposes of this scoping exercise has been assumed to accurately reflect the proposed schemes and the receiving environment.

2.B Description of the Proposed Site & the Surrounding Area

2.2 Section 1 (pp.1-2) of the proponent's scoping request report broadly identifies the areas of land that would be affected by the proposed development of the new flood alleviation channel and associated works.

2.3 The proposed route of the flood relief channels that would be constructed on land situated within the Royal Borough of Windsor & Maidenhead, within the Runnymede Borough Council area, and within the Spelthorne Borough Council area is shown in drawings SW-DR-V00058 (sheets 1 and 2), which are provided in Appendix A (Maps & Figures) to the proponent's scoping request report.

2.4 The locations of the proposed weir works at Sunbury, Molesey and Teddington, are shown in Drawings WS-DR-V-00012, WM-DR-V-00012, and WT-DR-V-00010, which are provided in Appendix A (Maps & Figures) to the proponent's scoping request report.

2.5 Section 7 (pp.29-39) to section 15 (pp.139-150) of the proponent's scoping request report each include a description of relevant baseline information for the areas of land that would be affected by the proposed flood alleviation scheme.

2.C Description of the Proposed Developments

2.C.1 Summary of information provided by the Proponent

2.6 Section 4 (pp.7-21) of the proponent's scoping request report provides a description of the proposed flood alleviation scheme and associated development. Those proposals include the construction of a flood relief channel (section 4.1.2, pp.7-11), to be created in three separate sections, a number of capacity improvements (section 4.1.3, pp.11-13), the

creation of a flood storage area (section 4.1.4, p.13), and a range of associated features including processing facilities to handle excavated materials, areas of landscape enhancement and habitat creation, visitor facilities and car parks, footpaths and cycleways, fishing platforms, and features to facilitate navigation of the channels by canoe (section 4.1.6, pp.14-15).

2.6.1 Detail of the proposed flood relief channels that would be constructed on land situated within the Royal Borough of Windsor & Maidenhead, within the Runnymede Borough Council area, and within the Spelthorne Borough Council area is shown in drawings SW-DR-V00058 (sheets 1 and 2), which are provided in Appendix A (Maps & Figures) to the proponent's scoping request report. Those drawings indicate where the proposed channels would be cut through natural ground and through made ground or landfill, indicate where flood protection embankments would be installed, and where separation embankments and bunds would be constructed. The drawings also indicate the channels would need to pass beneath existing transport infrastructure (road and rail), the likely locations of water control structures, and the site at which materials processing facilities would be located and excess spoil arising from the excavation of the channels would be deposited (referred to as 'landscape enhancement areas').

2.6.2 Detail of the proposed weir works at Sunbury, Molesey and Teddington, are shown in Drawings WS-DR-V-00012, WM-DR-V-00012, and WT-DR-V-00010, which are provided in Appendix A (Maps & Figures) to the proponent's scoping request report. At Sunbury and Teddington the proposed works would involve the construction of new weirs, and at Molesey would involve upgrade works to the existing Molesey C weir.

2.6.3 Details of the locations of the permanent and temporary compounds that would be established, in the latter case for the duration of the construction works, are provided in Drawing SW-DR-V-00054 (sheets 1 to 3) , which are provided in Appendix A (Maps & Figures) to the proponent's scoping request report.

2.6.4 The areas of land that are proposed for enhancement as 'habitat creation areas' are identified in Drawing SW-DR-V-00053 (sheets 1 and 2), which includes the location of the proposed flood storage area at Ham Lands in the London Borough of Richmond upon Thames are. The anticipated locations of the visitor centres, car parks and the extent of the network of cycle paths and footpaths that would be created as part of the wider scheme are given in Drawings C1-DR-L-000030, C2-DR-L-000021, and C3-DR-L-000020, which are provided in Appendix A (Maps & Figures) to the proponent's scoping request report.

2.C.2 The relevant planning authorities comments

2.7 The proponent should ensure that the description of the each development set out in each environmental statement is as accurate and firm as possible. The EIA process is iterative, and therefore elements of the individual developments, and the wider scheme, may change and evolve as the planning applications progress. The descriptions of the developments that are provided in the environmental statements must comply with the requirements of Regulation 18(3) and Schedule 4 of the EIA Regulations.

2.8 The relevant planning authorities advise that the full extent of each of the proposed developments should be described, and appropriate plans showing the application boundaries, and the use of different parts of each site during the different phases of the development, be provided. Any ancillary development required should be considered as part of the EIA process for each of the proposed developments.

2.9 The relevant planning authorities recommend that each environmental statement should include a clear description of all aspects and phases (e.g. construction, operation, decommissioning, aftercare) of the pertinent proposed development.

2.9.1 The permanent and temporary land use requirements of the different phases of each development should be identified.

2.9.2 The different phases of each proposed development should be described in as much detail as possible, covering site preparation (and remediation), construction and commissioning, occupation and operation, and where relevant decommissioning, reinstatement and aftercare.

2.9.3 The extent and nature of site preparation works that would be involved in the construction of any part of the scheme, and the way in which the excavation of materials from the proposed channels on both natural ground and made ground would be approached should be described. The excavation techniques that would be employed should be described, as should the means by which excavated material would be transported for processing or disposal. The location and anticipated scale and extent of any material stockpiles that may be created over the course of the developments should be identified and described.

2.9.4 The processes that would be employed at the proposed temporary materials processing areas should be fully described, including details of the measures that would deployed to control emissions and to dispose of any residues arising from that processing that may be unsuitable for re-use in the proposed ‘landscape enhancement areas’.

2.9.5 Where temporary land use is proposed as part of the schemes, details should be provided of how those areas of land would be restored, and remediated if necessary, to an appropriate and use, and of the measures that would be put in place to secure their appropriate management over the longer term.

2.9.6 The site access arrangements and transport routes that would be utilised for the different phases of each proposed development should be identified and described, including details of any road closures that may be required during the construction phase of the development.

2.9.7 The wastes and emissions, including to water, air and soil, and of noise, vibration, light, and heat, that would be expected to arise from the different phases of each proposed development should be described, along with the measures that would be taken to address any adverse impacts associated with those emissions or wastes. In particular, information should be provided about the amounts of material that it is anticipated would arise from the proposed excavation works, and the proportion of that material that would be suitable for re-use in the construction of the proposed bunds and embankments.

2.10 The relevant planning authorities have reviewed the information provided in the scoping request report and its accompanying appendices, and have produced a summary (see Appendix C to this scoping report) of the development as currently described. The main components of the development, as identified by the relevant planning authorities on the basis of the information provide are listed below. The relevant planning authorities would expect the descriptions of development provided in the planning applications that are to be submitted, and their accompanying environmental statements, to be set out in an equivalent level of detail to that provided below.

2.10.1 Royal Borough of Windsor & Maidenhead: The components of the scheme proposed on land within the borough would include the following:

- Construction of 2.01 kilometres of flood alleviation channel cut through natural ground, giving rise to some 292,350 m^3 of excavated material (sand, gravel, clays, soils).
- Construction of 2.31 kilometres of flood alleviation channel cut through closed landfill, giving rise to some 113,600 m^3 of excavated waste.
- Construction of 1.77 kilometres of separation/protection embankments and bunds, requiring between 70,920 m^3 and 531,900 m^3 of material.
- Construction of 6 flood embankments with a total length of 3.06 kilometres, requiring between 2,295 m^3 and 52,020 m^3 of material.
- Construction of 13 major structures to provide road, rail or path crossings and 5 major water control structures.

- Construction and operation of 3 potential temporary materials processing sites.
- Construction and use of 1 permanent compound, and installation and use of 5 temporary compounds.
- Undertaking of works at, and ongoing management of, 3 'Landscape Enhancement Areas', and 3 'Habitat Creation Areas', including the proposed construction of a number of raised earthworks described as 'beacons'.
- Construction of 2 visitor centres and 2 car parks, and creation of 8.14 kilometres of new cycle and foot paths.

2.10.2 Runnymede Borough Council: The components of the scheme proposed on land within the borough would include the following:

- Construction of 1.11 kilometres of flood alleviation channel cut through natural ground, giving rise to some 195,750 m^3 of excavated material (sand, gravel, clays, soils).
- Construction of 1.22 kilometres of flood alleviation channel cut through closed landfill, giving rise to some 97,600 m^3 of excavated waste.
- Construction of 5 flood embankments with a total length of 1.35 kilometres, requiring between 1,012.5 m^3 and 22,950 m^3 of material.
- Construction of 7 major structures to provide road, rail or path crossings, and 9 major water control structures.
- Construction and operation of 2 potential temporary materials processing sites.
- Construction and use of 2 permanent compounds, and installation and use of 2 temporary compounds.
- Undertaking of works at, and ongoing management of, 2 'Landscape Enhancement Areas' and 4 'Habitat Creation Areas', including the proposed construction of a number of raised earthworks described as 'beacons'.
- Construction of 1 visitor centre and 1 car park (possible locations identified), and creation of 5.13 kilometres of new cycle and foot paths.

2.10.3 Spelthorne Borough Council: The components of the scheme proposed on land within the borough would include the following:

- Construction of 0.14 kilometres of flood alleviation channel cut through natural ground, giving rise to some 18,900 m^3 of excavated material (sand, gravel, clays, soils).
- Construction of 1.42 kilometres of flood alleviation channel cut through closed landfill, giving rise to some 128,800 m^3 of excavated waste.

- Construction of 3 flood embankments with a total length of 1.44 kilometres, requiring between 1,080 m^3 and 24,480 m^3 of material.
- Construction of 10 major structures to provide road, rail or path crossings, and 3 major water control structures.
- Construction, and operation, of 2 potential temporary materials processing sites.
- Construction and use of 1 permanent compound, and installation and use of 3 temporary compounds.
- Undertaking of works at, and ongoing management of, 1 'Landscape Enhancement Area' and 2 'Habitat Creation Areas', including the proposed construction of a number of raised earthworks described as 'beacons'.
- Construction of 1 visitor centre and 1 car park, and creation of 5.65 kilometres of new cycle and foot paths.

2.10.4 Elmbridge Borough Council: The components of the scheme proposed on land within the borough would include the following:

- Widening of the Desborough Cut, and construction of 1 new weir complex at Sunbury, giving rise to an estimated 14,100 m^3 of construction, demolition and excavation waste.
- Installation and use of 1 temporary compound.
- Undertaking of works at, and ongoing management of, 1 'Habitat Creation Area'.

2.10.5 London Borough of Richmond upon Thames: The components of the scheme proposed on land within the borough would include the following:

- Construction of 1 new weir complex at Teddington, and upgrading of the Molesey C weir, giving rise to an estimated 2,000 m^3 of construction, demolition and excavation waste.
- Creation of a 4.5 hectare flood storage area at Ham Lands, giving rise to an estimated 90,000 m^3 of construction, demolition and excavation waste.
- Installation and use of 2 temporary compounds
- Undertaking of works at, and ongoing management of, 1 'Habitat Creation Area'

2.D Discussion of Alternatives

2.11 Paragraph (3)(d) of Regulation 18, and paragraph 2 of Schedule 4 of the EIA Regulations, require that environmental statements include some discussion of the alternatives to the proposed development that have been considered by the proponent.

2.12 Section 4.5 (pp.19-20) of the of the scoping request report makes reference to a range of options having been considered as part of the development of the Lower Thames Flood Risk Management Strategy, but provides no detail as to the specific alternatives considered as part of that process.

2.13 The relevant planning authorities recommend that the submitted environmental statements should include a discussion of the alternatives considered by the proponent. That discussion should cover, *inter alia*, alternative locations for the proposed channels, embankments and other associated structures and infrastructure, alternative options for the management and disposal of soil arising from the excavation works (i.e. compared with the proposed construction of a number of 'beacons' within the floodplain), and other options for the management of flood waters.

Section 3: General Advice on the Presentation & Content of the Environmental Statements

3.A Introduction

3.1 This section of the Scoping Opinion sets out the general advice and specific comments of the relevant planning authorities on the structure and preparation of the environmental statements, and the proposed content of the technical chapters as set out in the proponent's scoping opinion request report.

3.B Purpose of the Environmental Statement

3.2 An environmental statement is defined by Regulation 18 of the EIA Regulations as a statement that:

> **18.** (1) Subject to regulation 9, an EIA application must be accompanied by an environmental statement for the purposes of these Regulations.
>
> (2) A subsequent application is to be taken to be accompanied by an environmental statement for the purpose of paragraph (1) where the application for planning permission to which it relates was accompanied by a statement referred to by the applicant as an environmental statement for the purposes of these Regulations, but this is subject to regulation 9.
>
> (3) An environmental statement is a statement which includes at least—
>
> (a) a description of the proposed development comprising information on the site, design, size & other relevant features of the development;
>
> (b) a description of the likely significant effects of the proposed development on the environment;
>
> (c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce &, if possible, offset likely significant adverse effects on the environment;
>
> (d) a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development & its specific characteristics, & an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;
>
> (e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); &
>
> (f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development & to the environmental features likely to be significantly affected.

(4) An environmental statement must—

(a) where a scoping opinion or direction has been issued in accordance with regulation 15 or 16, be based on the most recent scoping opinion or direction issued (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion or direction);

(b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge ^ methods of assessment; &

(c) be prepared, taking into account the results of any relevant UK environmental assessment, which are reasonably available to the person preparing the environmental statement, with a view to avoiding duplication of assessment.

(5) In order to ensure the completeness & quality of the environmental statement—

(a) the developer must ensure that the environmental statement is prepared by competent experts; &

(b) the environmental statement must be accompanied by a statement from the developer outlining the relevant expertise or qualifications of such experts.

3.3 The purpose of an environmental statement is to enable the environmental impacts of a proposed development to be fully considered, alongside the anticipated economic or social benefits of the development (as detailed in the planning statement), before the application for planning consent is determined. The environmental statement provides environmental information to aid the decision making process.

3.4 The submitted environmental statements should be laid out clearly, with minimum use of technical terms (where feasible) and should provide an objective and realistic description of the likely significant impacts of the proposed developments. The information should be presented so as to be comprehensible to the specialist and non-specialist alike. The environmental statements should be concise with supporting technical information placed in appendices.

3.C Structure & presentation of the Environmental Statements

3.C.1 The information provided by the Proponent

3.5 The proponent's scoping request report outlines a broad approach to the EIA process, and the matters to be covered in the technical chapters of the environmental statements for the scheme as a whole. The proponent has not provided a breakdown of the individual applications into which the project would be divided, for the purposes of submission to the relevant planning authorities. The scoping request report appears to indicate that a single environmental statement would be prepared for the scheme in its entirety.

3.C.2 The relevant planning authorities advice & comments

3.6 The proposed scheme is for a major infrastructure project, the implementation of which would involve a range of physical works across land that falls under the control of six separate planning authorities. The relevant planning authorities have sought clarification from the proponent as to the number of applications which are expected to be submitted to each planning authority, and as to the nature of the development that each of those applications would address. The information provided to date by the proponent in response to the relevant planning authorities query is presented below.

"…the intention at this time is that the EIA will be documented in a single Environmental Statement to support the (likely) multiple planning applications.

The potential planning applications were discussed at the Consents & Authorisations Advisory Group Meeting no.3 (on 30/03/17), & it was minuted that there would be separate operational development planning applications covering each of the three sections of channel, & that separate change of use applications would be made where required (e.g. for the landscape enhancement areas). On this basis the following applications are likely to be required of each Local Authority:

For RBWM, at least 3 applications:

1. *Flood channel & structures for Channel Section 1 (CS1)*
2. *Sunnymeads Landscape Enhancement Area (LEA) (change of use)*
3. *Hythe End LEA (change of use)*

For Runnymede, at least 3 applications (it was noted that isolated structures such as the Chertsey Bourne spill in St Ann's lake could form part of the first application):

1. *Flood channel & structures for Channel Section 2 (CS2)*
2. *Royal Hythe LEA (change of use)*
3. *Abbey wetlands (change of use)*

For Spelthorne, probably 2 applications:

1. *Flood channel & structures for Channel Section 3 (CS3)*
2. *Manor Farm [Land east of Sheepwalk] LEA (change of use)*

For Elmbridge, probably 2 applications:

1. *Works at Sunbury weir*
2. *Desborough Cut capacity improvements*

For LBRUT, 3 applications (it may be possible for the first 2 applications to be combined):

1. *Works at Molesey weir*
2. *Works at Teddington weir*
3. *North Ham Lands flood storage area"*

Source: E-mail correspondence between Kerry Quinton at GBV JV Ltd & Jessica Salder of Surrey County Council, dated 26 June 2017

Note: in the source e-mail the widening of the Desborough Cut is incorrectly listed as being within the administrative area covered by Spelthorne Borough Council.

3.7 The proponent's suggestion that a single over-arching environmental statement would be prepared, covering the scheme in its entirety is a matter of concern for the relevant planning authorities, given that the proponent intends to submit multiple individual applications for different components of the scheme. Whilst it is accepted that an over-arching assessment needs to be undertaken, to ensure that the cumulative effects of the development in its entirety are identified and assessed, the way in which the outcomes of that assessment are captured and presented requires some careful thought.

3.8 In order to expedite the planning application process, with reference to the multiple applications that are to be submitted, it is important, from an EIA perspective, that each application is supported by the environmental information that is most relevant to the development to which the application relates. For example, for applications submitted to Runnymede Borough Council, which is located in Surrey, the submission of ecological surveys and assessments relating to land that is located outside that borough would not be relevant to any application that may be before them.

3.9 The relevant planning authorities would expect the environmental statement for the River Thames Scheme to be presented in such a way that enables it to be easily split, so that each planning application submitted in respect of the wider scheme is supported by only that environmental information that is directly relevant to it. The environmental statement submitted for each application should include information about the cumulative effects of the entire River Thames Scheme, and of the contribution that the component to which the application relates would make to those cumulative effects.

3.10 Each environmental statement submitted in support of each planning application should be clearly and coherently structured, not a collection of disparate reports, with consistent chapter, section and paragraph numbering. Technical appendices should be clearly referenced throughout each environmental statement, and numbered and presented in a way that affords ready access to the supporting information for specialist and non-specialist readers alike.

3.11 A common approach to the use of terminology should be adopted throughout the environmental statements, to ensure consistency and ease of understanding for all users of the documents. Time periods should be defined, such that for example, 'short term' always refers to the same period of time (e.g. 1-5 years from the start of the operational phase, etc.), across all of the environmental statements.

3.12 A glossary of technical terms, and a list of abbreviations and acronyms should be included in each of the environmental statements, covering all of the technical chapters and the appendices. A standard approach to referencing should be adopted across all chapters of all of the environmental statements, for example if 'Chapter 1' uses endnotes to reference

then all subsequent chapters should do likewise. A bibliography should be included within each environmental statement, covering the references cited in all chapters of the documents, and the appendices. The author, date and publication title should be given for all references.

3.13 The environmental statements should have all of their paragraphs numbered, to enable easy, accurate and consistent referencing by all users of the documents. All figures, drawings, photographs and photomontages presented in the environmental statements and the supporting appendices should be clearly referenced, and where appropriate should clearly show the boundaries of the proposed sites and their relationship to each other. The appendices to each environmental statement must be clearly numbered and should have paragraph and page numbering throughout.

3.14 Paragraph (3)(e) of Regulation 18, and paragraph 9 of Schedule 4 of the EIA Regulations require that a non-technical summary be provided for each environmental statement. The non-technical summary should comprise a summary of the assessment in simple language, and should be supported by appropriate figures, photographs and photomontages.

3.D The scope & method of assessment

3.D.1 The information provided by the proponent

3.15 Each of the technical sections (sections 7 to 15) of the proponent's scoping request report provides explanation of the methods of assessment that would be employed in respect of the environmental receptors that are expected to be affected by the proposed scheme.

3.15.1 In section 7 (Air Quality & Climatic Factors, pp.29-39), sub-section 7.4 (pp.38-39) outlines the assessment methodology that would be followed for air quality, and sub-section 7.5 (p.39) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

3.15.2 In section 8 (Biodiversity, pp.40-62), sub-section 8.4 (pp.61-62) outlines the assessment methodology that would be followed for protected sites, habitats and species, and sub-section 8.5 (p.62) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

3.15.3 In section 9 (Cultural Heritage, Archaeology & Built Heritage, pp.63-77), sub-section 9.4 (p.76) outlines the assessment methodology that would be followed for archaeological and built heritage assets, and sub-section 9.5 (p.77) identifies

the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

3.15.4 In section 10 (Landscape & Visual Amenity, pp.78-90), sub-section 10.4 (p.90) outlines the assessment methodology that would be followed for effects on landscape character and visual amenity, and sub-section 10.5 (p.90) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

3.15.5 In section 11 (Natural Resources & Waste, pp.91-98), sub-section 11.4 (p.97) reports that the topic has been scoped out of the assessment, and sub-section 7.5 (p.39) identifies the assumptions that underpinned the scoping assessment and judgement.

3.15.6 In section 12 (Population (including Noise, Vibration & Land Use), pp.98-117), sub-section 12.4 (pp.116-117) outlines the assessment methodologies that would be followed for flood risk (sub-section 12.4.1, p.116), land use (sub-section 12.4.2, p.116), population, health, recreation and tourism (sub-section 12.4.3, pp.116-117), and noise and vibration (sub-section 12.4.4, p.117). Sub-section 7.5 (p.117) identifies the limitations that would be expected to affect the assessments and the assumptions that would be made in the course of the assessments.

3.15.7 In section 13 (Soils & Geology (including Contaminated Land), pp.118-124), sub-section 13.4 (p.124) outlines the assessment methodology that would be followed for soils, hydrogeology and contaminated land, and sub-section 13.5 (p.124) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

3.15.8 In section 14 (Surface Water, Groundwater & Water Framework Directive, pp.125-138), sub-section 14.4 (p.138) outlines the assessment methodology that would be followed for the assessment of impacts on surface waters, groundwaters, flood risk, and for Water Framework Directive compliance. Sub-section 14.5 (p.138) identifies the limitations that would be expected to affect the assessments and the assumptions that would be made in the course of the assessments.

3.15.9 In section 15 (Traffic & Transport, pp.139-150), sub-section 15.4 (p.150) outlines the assessment methodology that would be followed for traffic and transport effects, and sub-section 15.5 (p.150) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

3.D.2 The relevant planning authorities advice

3.D.2.1 Defining the legal & policy context for the assessment

3.16 Each technical chapter should identify the standards, guidelines and legislation that are relevant to the aspect of the environment under consideration, particularly where such information has been used to inform the design of the assessment process. This should include guidelines prepared by relevant professional bodies.

3.17 In terms of other regulatory regimes, any relevant permits, consents and licences that might also be required in addition to planning permission (e.g. protected species licences, Environmental Permits, etc.), should be listed in the appropriate technical chapter.

3.D.2.2 Defining the scope & method of the assessment

3.18 Each technical chapter should define the physical and temporal scope and breadth (i.e. the range of matters to be considered) of the assessment for the aspect of the environment under consideration (e.g. ecology, etc.). The scope and breadth of the assessment should be defined in line with the relevant recognised professional guidance (e.g. the Chartered Institute for Ecology & Environmental Management '*Guidelines for Ecological Impact Assessment'*, etc.) and best practice, and should also be agreed with the relevant consultees (e.g. Natural England, the Environment Agency, Historic England, etc.). Where consultation has not been possible, the reasons why should be stated clearly in the technical chapter. Where the scope and breadth of the assessment is not consistent with the relevant professional guidance and best practice, or is contrary to the advice of relevant consultees, the reasons for the difference of approach should be stated in the technical chapter.

3.19 In terms of temporal scope, it is recommended that where appropriate, each assessment should consider the impacts of:

3.19.1 The site preparation (including any necessary remediation works) and construction phases of each of the proposed developments.

3.19.2 The operational phases of each of the proposed development, including any ongoing maintenance works that need to be undertaken on a regular basis to keep the flood channels, water control structures and other essential infrastructure in optimum condition.

3.19.3 The decommissioning and restoration phases of the proposed development, including any ongoing aftercare and long term management requirements.

3.20 In terms of the description of the proposed method of assessment it is recommended that, where appropriate, each technical chapter of each environmental statement should cover the following matters:

3.20.1 Identification of relevant impact pathways (source-pathway-receptor) by which the aspect of the environment could be directly or indirectly affected by the components of the River Thames Scheme to which the application relates.

3.20.2 Description of the different types of data to be collected to inform the description of baseline conditions, and the assessment of the likely significant impacts of the components of the River Thames Scheme to which the application relates.

3.20.3 Description of the different methods of data collection to be employed, the guidance that would be followed in deciding on the appropriate sampling/surveying regimes (e.g. no. of sampling/surveying events, timing of surveys etc.), and any forward programming of re-sampling or verification that would need to be deployed to ensure that the information relied upon is the most up to date.

3.20.4 Description of the methods of data interpretation and analysis that would be employed as part of the assessment process.

3.20.5 Description of the methods of cumulative impact assessment and analysis that would be used to study the likely interactions of the effects of the components of the River Thames Scheme to which the application relates in-combination with the other components of the Scheme, and with other unrelated permitted or proposed development.

3.20.6 Discussion of any known difficulties or limitations that could affect the robustness of the data relied upon in the assessment.

3.D.2.3 Describing the baseline situation

3.21 The baseline should describe existing conditions at the site that would be affected by the proposed development. The baseline situation should be described for each aspect of the environment that would be affected, in each of the environmental statements, with information provided about the dates of any surveys or sampling work undertaken. The baseline data reported in the environmental statements should be the most relevant and up to date, and a consistent approach to data collection and recording should be taken across all the environmental statements submitted in respect of the different components of the proposed Scheme.

3.22 For each aspect of the environment the baseline data sources relied upon should be identified, and details (including dates) should be provided of any survey or sampling work undertaken. The timing and scope of all surveys or sampling programmes should, wherever possible be agreed with the relevant planning authority, with relevant statutory bodies and/or appropriate consultees.

3.D.2.4 Identification & assessment of impacts

3.23 The EIA Regulations require the identification of the 'likely significant effects of the development on the environment' (Regulation 18(3)(b)). As a matter of principle, the relevant planning authorities employ a precautionary approach to judging 'significant effects'. In other words 'likely to affect' will be taken as meaning that there is a probability or risk that the development will have an effect, and not that a development will definitely have an effect.

3.24 Each environmental statement must clearly define the meaning of 'significant' that has been applied in the context of each of the aspects of the environment that have been assessed, and the likely significant impacts of each component of the Scheme must be clearly identified. Quantitative criteria and/or standards should be used where available. This should also apply to the consideration of cumulative impacts, and impact inter-relationships. A consistent approach should be taken across all the environmental statements when defining impact significance.

3.D.2.5 Identification of mitigation measures & evaluation of residual impacts

3.25 Mitigation measures may fall into a range of categories namely: avoidance of impacts; reduction in the magnitude of impacts; or compensation for losses incurred through unavoidable impacts (see Schedule 4, paragraph 7); and should be identified as such in the technical chapters of each environmental statement.

3.26 Mitigation measures should not be developed in isolation, as they may relate to more than one aspect of the environment (e.g. mitigation to address issues of landscaping, surface water management and biodiversity), and to more than one component of the Scheme. For each aspect of the environment under consideration, the environmental statements should set out the mitigation measures required to prevent, reduce and where possible offset any significant adverse effects. The environmental statements should also identify any residual effects that could be expected to persist even with mitigation in place. Any proposed mitigation should be discussed and agreed with the relevant planning authority and with relevant consultees.

3.27 The anticipated effectiveness of any mitigation measures proposed should be addressed in each of the environmental statements. Only mitigation measures that can be shown to be deliverable (i.e. technically and financially viable), and for which the proponent has given a firm commitment to implement as part of any permission granted, should be taken into account as part of the assessment.

3.28 The mitigation measures proposed in each technical chapter should be cross-referred to specific conditions or legal agreements that could be attached to any permission granted. It is further recommended that a section is included in each environmental statement in which the mitigation measures proposed across all the technical chapters are collated, and presented as an integrated package of mitigation.

3.29 It is considered best practice to outline in each environmental statement, the structure of the environmental management and monitoring plan and safety procedures which would apply across the site during all phases of each component of the wider Scheme.

3.D.2.6 Cross references, interactions & summarising the findings

3.30 All specialist chapters should be cross-referenced to other relevant disciplines (e.g. air quality impacts on ecology, traffic impacts on air quality, etc.). Consideration of the potential for interactions between the different aspects of the environment is essential to the production of a robust assessment. The environmental statements should not be a collection of separate specialist chapters, but a comprehensive assessment of the environmental impacts of the proposed components of the wider Scheme, and should account for how the identified impacts could be mitigated or avoided, or how suitable compensation could be provided to offset those effects.

3.31 In accordance with the requirements of paragraph 6 of Schedule 4 of the EIA Regulations, each technical chapter should include a discussion of any difficulties (e.g. technical deficiencies, lack of know-how, etc.) encountered by the proponent during the preparation of the environmental statements.

Section 4: Specific Advice on the Technical Content of the Environmental Statements

4.A Overview of the proposed Technical Content of the Environmental Statements

4.1 The environmental statements should be proportionate in their consideration of the aspects of the environment listed under Paragraph 2of Regulation 4 of the EIA Regulations. Those aspects of the environment that are subject to the most significant impacts from the components of the wider Scheme to which the application would relate should be the primary focus of each environmental statement.

4.2 The proponent has advised that it is their intention to produce a single environmental statement, which would cover the following topics:

- Air Quality & Climatic Factors (section 7 (pp.29-39) of the *Draft EIA Scoping Report*, dated June 2017)
- Biodiversity (section 8 (pp.40-62) of the *Draft EIA Scoping Report*, dated June 2017)
- Cultural Heritage, Archaeology & Built Heritage (section 9 (pp.63-77) of the *Draft EIA Scoping Report*, dated June 2017)
- Landscape & Visual Amenity (section 10 (pp.78-90) of the *Draft EIA Scoping Report*, dated June 2017)
- Population (including Noise, Vibration & Land Use) (section 12 (pp.98-117) of the *Draft EIA Scoping Report*, dated June 2017)
- Soils & Geology (including Contaminated Land) (section 13 (pp.118-124) of the *Draft EIA Scoping Report*, dated June 2017)
- Surface Water, Groundwater & Water Framework Directive (section 14 (pp.125-138) of the *Draft EIA Scoping Report*, dated June 2017)
- Traffic & Transport (section 15 (pp.139-151) of the *Draft EIA Scoping Report*, dated June 2017)

4.3 The proponent's scoping report has concluded that the following topic would not be addressed in the environmental statement for the scheme. However, the relevant planning authorities and the Environment Agency are of the view that the topic does need to be assessed in the submitted environmental statements.

- Natural Resources & Waste (section 11 (pp.91-97) of the *Draft EIA Scoping Report*, dated June 2017)

4.4 Sections 4.B to 4.J of this report summarise the information provided for the different aspects of the environment covered by the proponent's scoping report, and give the relevant planning authorities recommendations in respect of each aspect of the environment.

4.B Air Quality & Climatic Factors

4.B.1 The information provided by the proponent

4.5 Sub-section 7.2 (Baseline Information, pp.29-34) of Section 7 (Air Quality & Climatic Factors, pp.29-39) of the scoping request report, provides a description of the baseline situation for the area that would be affected by the development in respect of climate change (sub-section 7.2.1, pp.29-30), and of air quality (sub-section 7.2.2, pp.30-33). The predicted future baselines for climate change and air quality are discussed in section 7.2.3 (p.34).

4.6 Sub-section 7.2.2 (pp.30-33) covers background air quality in terms of particulate matter (paragraph 7.2.2.2, p.30), nitrogen dioxide concentrations (paragraph 7.2.2.3, p.30), of defined Air Quality Management Areas (AQMAs) along the three main channel sections (paragraphs 7.2.2.4 to 7.2.2.9, pp.31-32) and for the three weirs that are to be constructed or improved (paragraphs 7.2.2.10 to 7.2.2.12, p.32), and of emissions of landfill gas (paragraphs 7.2.2.13 to 7.2.2.17, p.33). In total seven AQMAs (see below) are identified as being contiguous with, or located in close proximity to, the land that would be affected by one of more of the components of the proposed scheme.

4.6.1 The 'Wraysbury Road / M25, Junction 13' AQMA which is located within the Royal Borough of Windsor & Maidenhead, and was declared in April 2014 for annual mean NO_2 concentrations (paragraph 7.2.2.5, p.31);

4.6.2 The borough wide AQMA that covers the whole of Spelthorne Borough Council's area, which was declared in 2000 for annual mean and 24-hour mean NO_2 concentrations (the 24-hour mean declaration was revoked in 2003) (paragraph 7.2.2.5, p.31, and paragraphs 7.2.2.8 and 7.2.2.9, p.32);

4.6.3 The AQMA that extends along the entire length of the M25 within the borough of Runnymede, and around an area of land encompassing Vicarage Road and the High Street in Egham, originally declared in 2001 for NO_2 and PM_{10}, with the extended AQMA declared in 2015 for NO_2 (paragraph 7.2.2.7, p.31);

4.6.4 The 'Hampton Court Parade' AQMA which is located within the Elmbridge Borough Council area, and was declared for NO_2 concentrations (paragraphs 7.2.2.11 and 7.2.2.12, p.32);

4.6.5 The borough wide AQMA that covers the whole of the London Borough of Richmond upon Thames, and was declared for NO_2 and PM_{10} (paragraphs 7.2.2.11 and 7.2.2.12, p.32);

4.6.6 The borough wide AQMA that covers the whole of the Royal Borough of Kingston upon Thames, and was declared for NO_2 and PM_{10}. (paragraphs 7.2.2.11 and 7.2.2.12, p.32).

4.7 The baseline for climatic factors provided in sub-section 7.2.1 (pp.29-30) focuses solely on the impact of climate change on average UK and global temperatures. No information is provided in respect of the relative contributions of the different boroughs in which the scheme would be located to carbon emissions, nor of the carbon emissions associated with different forms of land use or economic activity.

4.8 Sub-section 7.3 (pp.34-37) identifies the potential impacts of the proposed scheme on air quality and climatic factors, which are summarised for the construction and operational phases of the scheme in Table 7-3 (pp.35-37). The impacts of the proposed development on climate change, in terms of emissions of greenhouse gases, were not classed as significant.

4.8.1 For the construction phase, Table 7-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Potential adverse impacts on air quality and AQMAs from the release of dust during project construction.
- Potential adverse effects on local residents and businesses from the release of odours from channel excavation through landfill;
- Potential adverse impacts on air quality and AQMAs from emissions from construction traffic and plant.

4.8.2 For the operational phase, Table 7-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Potential adverse impact on air quality and AQMAs due to permanent increase in road traffic accessing the new landscape enhancement areas.

4.9 Sub-section 7.4 (pp.38-39) outlines the assessment methodology that would be followed for air quality, and sub-section 7.5 (p.39) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

4.B.2 The relevant planning authorities & consultee comments & advice

4.10 The relevant planning authorities recommend that the submitted environmental statements must take account of the following matters with reference to impacts on air quality and on climate change.

4.10.1 For the assessment of the air quality impacts of traffic-related emissions, the relevant planning authorities would expect the proponent to follow the methodology set out in the Environmental Protection UK (EPUK)/Institute of Air Quality Management (IAQM) guidance '*Land-Use Planning & Development Control: Planning for Air Quality'* (2017, v.1.2).

4.10.2 For the assessment of the risk of dust impacts during construction, the relevant planning authorities would expect the proponent to follow the methodology set out in the IAQM publication '*Guidance on the assessment of dust from demolition & construction'* (2014). For the assessment of the risk of dust impacts arising from the processing of as raised materials, the relevant planning authorities would expect the proponent to follow the methodology set out in the 2016 IAQM publication '*Guidance on the Assessment of Minerals Dust Impacts for Planning*' (2016, v.1.1).

4.10.3 For the assessment of odour impacts, the relevant planning authorities would expect the proponent to follow the methodology set out in the IAQM '*Guidance on the assessment of odour for planning'* (2014). The IAQM guidance provides a multi-tool approach, each tool having a differing level of detail and sophistication. The proponent would need to decide on the most appropriate tool(s) depending on the likelihood of impact.

4.10.4 The likely contribution of the proposed scheme to the causes of climate change has been classed as non-significant in the proponents scoping request report, on the basis of assertion rather than evidence. The climate change baseline presented in the scoping request report deals only with increases in temperature, and does not address the question of greenhouse gas emissions. The relevant planning authorities would expect the proponent to provide an evidence based argument for excluding climatic factors from the scope of the EIA process. To inform that process a review of the baseline situation for the area of land that would be affected by the development, in terms of the greenhouse gas emissions attributed to the relevant boroughs within which that land is located, should be included as part of the EIA.

4.C Biodiversity

4.C.1 The information provided by the proponent

4.11 Sub-section 8.2 (Baseline Information, pp.40-51) of Section 8 (Biodiversity, pp.40-62) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of terrestrial and aquatic biodiversity.

4.11.1 Sub-section 8.2.1 (pp.40-42) discusses the relationship of the area of land that would be affected by the main components of scheme (channel sections 1 to 3, weir works at Sunbury, Molesey and Teddington, and the flood storage area at Ham Lands), to a number of statutory and non-statutory nature conservation designations, including those protected by international convention, European and domestic law, and designation at the local level. The site of principal interest is the South West London Waterbodies Special Protection Area (SPA) and Ramsar Site, which is composed of seven separate Sites of Special Scientific Interest (SSSIs), with the section 1 of the flood alleviation channel proposed to pass through the Wraysbury & Hythe End Gravel Pits SSSI. Section 2 of the proposed channel would pass close to the Thorpe Hay Meadow SSSI.

4.11.2 Sub-section 8.2.2 (pp.42-44) describes the range of habitats that would be affected by the proposed scheme, including standing water, broadleaved semi-natural woodland and parkland, cultivated /disturbed arable land, amenity and improved grassland, and semi-improved and improved neutral grassland.

4.11.3 Sub-section 8.2.3 (pp.44-50) identifies those protected and notable species of local or higher level value identified as being present within the study area during the preliminary ecological surveys and evaluations. The range of fauna covered included mammals, amphibians, reptiles, birds, terrestrial invertebrates, fish, zooplankton, and aquatic macroinvertebrates. Paragraphs 8.2.3.50 to 8.2.3.53 (pp.49-50) cover macrophyte assemblages in the lakes within the study area.

4.11.4 Sub-section 8.2.4 (pp.50-51) describes the baseline situation with reference to invasive non-native species (INNS), in respect of both terrestrial and aquatic habitats.

4.11.5 Sub-section 8.2.5 (p.51) briefly discusses how the baseline situation might be expected to change in the future, in the absence of the proposed scheme.

4.12 Sub-section 8.3 (pp.51-60) identifies the potential impacts of the proposed scheme on designated nature conservation sites, habitats and species, which are summarised for the construction and operational phases of the scheme in Table 8-3 (pp.52-60).

4.12.1 For the construction phase, Table 8-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Adverse disturbance of designated site interest features (birds) noise, vibration, lighting and visual disturbance.
- Potential adverse effect on Thorpe Hay Meadow SSSI from construction dust.
- Potential adverse effect on designated sites from spread of invasive non-native species.
- Potential adverse disturbance to aquatic and terrestrial protected and notable species via noise, vibration, lighting and visual disturbance.
- Spread of invasive non-native species could adversely affect aquatic/terrestrial habitats, protected and notable species.
- Adverse effect of clearance of vegetation on terrestrial protected and notable species.
- Potential for release/disturbance of sediment which may have an adverse effect on aquatic habitats, protected and notable species.
- Potential adverse effect of loss of bat roosts, due to the demolition of buildings.

4.12.2 For the operational phase, Table 8-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Potential for changes in water quality to negatively affect interest features of designated sites.
- Adverse effect on aquatic habitats in designated sites from spread of invasive non-native species.
- Potential adverse effect from loss of open water habitat within the South West London Waterbodies SPA as a result of the presence of separation embankments.
- Potential positive effect on designated sites via provision of enhanced or new habitats (and new habitat corridor).
- Habitat severance caused by existence of the flood relief channel might lead to negative effects on movement of terrestrial protected and notable species.
- Adverse effect on aquatic habitats, protected and notable species from spread of invasive non-native species.

- Potential changes in water quality may negatively affect aquatic habitats, protected and notable species.
- Potential negative disturbance of terrestrial habitats, protected and notable species through increased public access.
- Potential beneficial effect of net gain in biodiversity during operation (of the flood relief channel and the landscape enhancement areas).

4.13 Sub-section 8.4 (pp.61-62) outlines the assessment methodology that would be followed for protected sites, habitats and species, and sub-section 8.5 (p.62) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

4.C.2 The relevant planning authorities & consultee comments & advice

4.14 The relevant planning authorities recommend that the submitted environmental statements must take account of the advice provided by Natural England, the Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust, Surrey County Council's ecologist, and the Surrey Wildlife Trust (see below). Full details of that advice are given in Appendix A to this Scoping Opinion.

4.14.1 With reference to the sites of national and supra-national importance for nature conservation, Natural England have highlighted the need for the assessment to cover the designated sites listed below. With reference to the construction phase of the scheme Natural England has highlighted the need for the project to demonstrate compliance with relevant legislation protecting sensitive sites and species. Natural England also asked that greater detail be provided about the biodiversity benefits that it is anticipated will be delivered by the scheme.

- South West London Waterbodies SPA and Ramsar Site;
- Wraysbury & Hythe End Gravel Pits SSSI;
- Wraysbury No.1 Gravel Pit SSSI;
- Thorpe Park No.1 Gravel Pit SSSI;
- Thorpe Hay Meadow SSSI;
- Dumsey Meadow SSSI

4.14.2 Surrey County Council's ecologist has recommended that:

- Further survey and assessment work is required with reference to terrestrial invertebrates, which are an important part of terrestrial ecosystems.

- With reference to the proposals for habitat enhancement, account should be taken of the relevant Biodiversity Opportunity Areas (BOA), and their associated Policy Statements, which could help to inform the design of the habitat creation areas.
- An index of the habitat and species surveys be provided, identifying in each case the date of the survey, its areal extent, and the time period for which it could be considered valid (e.g. 2 years, 3 years, etc.), to ensure that planning decisions are being informed by the most up-to-date information.
- Greater clarity is needed when discussing locally designated nature conservation sites, in terms of the nomenclature used cross the different planning authority areas.

4.14.3 The Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust has recommended that:

- Further surveys and assessment work is required with reference to the potential for stag beetles in the area surrounding the route of section 1 of the proposed channel.
- Further surveys and assessment work is required with reference to the potential for galingale (*Cyperus longus*) in and around the area that would be affected by section 1 of the proposed channel.
- The assessment of cumulative ecological impacts should include consideration of the proposed expansion of Heathrow Airport. That assessment should cover impacts on the features for which sites are designated, including but not limited to birdstrike, other habitats and species of conservation interest, the Colne Brook, and the Colne Valley Regional Park.
- The assessment of impacts on great crested newts should include the potential effects of terrestrial habitat fragmentation associated with the construction of the proposed flood alleviation channels.
- The EIA should include provision for the monitoring of the ecological development of the habitats that are to be created as part of the scheme.
- The EIA should be clear as to whether the proposed net gain in biodiversity would apply at the local planning authority level, or at the level of the scheme as a whole.

4.14.4 The Surrey Wildlife Trust has recommended that:

- With reference to the proposed habitat creation, reference should be made to the Surrey Nature Partnership's adopted objectives and targets, as given in the relevant Biodiversity Opportunity Area policy statement.

- The habitat creation proposals take account of the historic land management practices encountered in the Thames floodplain, and seek to create wet/seasonally flooded grasslands in low lying areas, and lowland dry acid grasslands in more elevated locations.
- The assessment take account of the likely presence in the affected area of Nathusis' pipestrelle, as both a commuting and a resident species.

4.D Cultural Heritage, Archaeology & Built Heritage

4.D.1 The information provided by the proponent

4.15 Sub-section 9.2 (Baseline Information, pp.63-73) of Section 9 (Cultural Heritage, Archaeology & Built Heritage, pp.63-77) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of archaeology, built heritage and the historic landscape.

4.15.1 Paragraphs 9.2.1.1 to 9.2.1.9 (pp.63-65) report on recent archaeological investigations undertaken in the vicinity of the land that would be affected by the proposed flood alleviation scheme, and provides an overview of the evidence that has been found for different types of occupation and use of the area since the Palaeolithic period.

4.15.2 Sub-section 9.2.2 (pp.65-66) reports on the heritage context of section 1 of the proposed flood alleviation channel, which encompasses 2 Scheduled Monuments,1 Registered Park & Garden, and 14 Listed Buildings. A total of 101 non-designated heritage assets were identified within the area affected by section 1 of the channel.

4.15.3 Sub-section 9.2.3(pp.66-67) reports on the heritage context of section 2 of the proposed flood alleviation channel, which encompasses 2 Scheduled Monuments and 24 Listed Buildings, and 63 non-designated heritage assets.

4.15.4 Sub-section 9.2.4 (pp.67-68) reports on the heritage context of section 3 of the proposed flood alleviation channel, which encompasses 1 Scheduled Monument, 24 Listed Buildings and 76 non-designated heritage assets.

4.15.5 Sub-section 9.2.5 (pp.68-69) reports on the heritage context of the Desborough Cut and the surrounding area, which encompasses 5 Listed Buildings, 1 Registered Park & Garden, and 32 non-designated heritage assets.

4.15.6 Sub-section 9.2.6 (pp.69-70) reports on the heritage context of the three weirs at which new capacity works would be undertaken (Sunbury, Molesey and Teddington). At Sunbury weir the heritage context comprises of 19 Listed Buildings and 26 non-designated heritage assets. At Molesey weir the heritage context comprises 1 Scheduled Monument, 3 Registered Parks & Gardens, 27 Listed Buildings and 41 non-designated heritage assets. At Teddington weir the heritage context comprises 8 Listed Buildings and 15 non-designated heritage assets.

4.15.7 Sub-section 9.2.7 (pp.70-71) reports on the heritage context of the proposed flood storage area at Ham Lands, which encompasses 73 Listed Buildings, 3 Registered Parks & Gardens, and 118 non-designated heritage assets.

4.15.8 Sub-section 9.2.8 (pp.71-72) reports on the archaeological potential of the areas of land that would be affected by the different components of the proposed scheme. Areas of 'high' archaeological potential have been identified for all three sections of the proposed channel, and for the Desborough Cut.

4.16 Sub-section 9.3 (pp.73-75) identifies the potential impacts of the proposed scheme on built heritage and archaeology, which are summarised for the construction and operational phases of the scheme in Table 9-3 (pp.74-75).

4.16.1 For the construction phase, Table 9-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Damage to or disturbance of unknown buried archaeology during construction.

4.16.2 For the operational phase, Table 9-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Beneficial reduction in flood risk to designated heritage features.
- Reduced flood risk may have beneficial effects on the preservation of unknown buried archaeology.
- Adverse effect on the setting (both visual and conceptual) of key designated heritage assets, including Scheduled Monuments, Conservation Areas, and Listed Buildings.

4.17 Sub-section 9.4 (p.76) outlines the assessment methodology that would be followed for archaeological and built heritage assets, and sub-section 9.5 (p.77) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

4.D.2 The relevant planning authorities & consultee comments & advice

4.18 The relevant planning authorities recommend that the submitted environmental statements must take account of the advice provided by Historic England, Surrey County Council's archaeological officer, and Surrey County Council's historic building officer (see below). Full details of that advice are given in Appendix A to this Scoping Opinion.

4.18.1 Historic England has recommended that:

- The area covered by the assessment of impacts on designated heritage assets (including Scheduled Monuments, Listed Buildings, Conservation Areas, and Registered Parks & Gardens of Special Historic Interest) be expanded, to ensure that all effects on context and setting are fully identified and assessed. An arbitrary radial search (500 metre study area) is unlikely to accurately reflect the impact of the development on heritage assets in the wider area.
- The assessment should fully consider the potential impacts of the development on non-designated features of historic, architectural, archaeological or artistic interest. Account should be taken of the potential effects of both the main development and associated activities (e.g. traffic, maintenance works, recreational use, etc.), and of physical changes (e.g. to drainage and groundwater), that could impact upon, the integrity, context or setting of non-designated assets.
- An integrated landscape approach to the assessment of the effects of the proposed development designated and non-designated heritage assets should be pursued through the EIA process.
- The EIA reflect the advice given by the Historic England Science Advisor, in respect of the issue of geo-archaeological assessment, which it is anticipated will underpin the other historic environment and landscape assessments. The environmental statements would be expected to include geo-archaeological assessment as part of the cultural heritage chapters.
- For the proposed Ham Lands flood storage area, the assessment should determine the extent of any past gravel extraction from that site and identify extent to which archaeological deposits have survived. Monitoring and review of geotechnical works at the site by an archaeologist and a geo-archaeologist will be required, and evaluation trenching is also likely to be necessary, to inform the development of an appropriate mitigation and monitoring plan.

- For the Abbey Meads area, the assessment should sufficiently characterise the archaeological resource and significance of the area, with particular reference to the relationship of the land to Chertsey Abbey (Scheduled Monument).
- For Laleham Burway, the assessment should include investigations of, and around, the Scheduled Monument that is situated in that area, to inform the design of the habitats that it is proposed will be created as part of the flood alleviation scheme.

4.18.2 Surrey County Council's archaeological officer has reported that the programme of desk based assessment, site investigation, and trial trenching has been designed in consultation with the County Council's heritage conservation team. The approach to the assessment of the proposed development's impact on the archaeological heritage of the area set out in the scoping request report is considered to be an appropriate methodology for such work.

4.18.3 Surrey County Council's historic buildings officer has recommended that the assessment needs to take account of the impact that the construction of bunds or undertaking of ground raising works would have on the context and setting of nearby Listed Buildings and Conservation Areas.

4.E Landscape & Visual Amenity

4.E.1 The information provided by the proponent

4.19 Sub-section 10.2 (Baseline Information, pp.79-83) of Section 10 (Landscape & Visual Amenity, pp.79-90) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of landscape character and visual amenity.

4.19.1 Sub-section 10.2.1 (pp.79-81) provides an account of baseline landscape character conditions for the area of land that would be affected by the proposed flood alleviation scheme and associated works. The entire area of land that would be affected sits within the Thames Valley National Character Area (NCA 115), characterised by the open floodplains of the River Thames and its tributaries.

4.19.2 Sub-section 10.2.2 (pp.81-82) provides an account of the landscape and related designations that are relevant to the areas of land that would be affected by the proposed flood alleviation scheme and associated works. The area is not subject to any national level designations, but does include a number of areas identified through Local Plans, a number of Registered Parks & Gardens, and ten

Conservation Areas. The area is also crossed by a number of public rights of way.

4.19.3 Sub-section 10.2.3 (p.82) identifies the key visual receptors that could be affected by the construction and operation of the proposed flood alleviation scheme and associated development.

4.19.4 Sub-section 10.2.4 (p.82) provides an account of the way in which the landscape and visual baseline would be expected to change in the future, in the absence of the proposed flood alleviation scheme and associated development.

4.20 Sub-section 10.3 (pp.83-89) identifies the potential impacts of the proposed scheme on landscape character and visual amenity, which are summarised for the construction and operational phases of the scheme in Table 10-3 (pp.84-89).

4.20.1 For the construction phase, Table 10-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Adverse visual effects on residents at home.
- Adverse visual effects on users of the Thames Path (National Trail), National Cycling Routes, other public rights of way, and public open space.
- Adverse visual effects on leisure users of recreational facilities (such as moorings, fishing lakes, sailing lakes, watersports lakes, Thorpe Park and golf courses).
- Adverse visual effects on users of public highways (i.e. motorways, roads and railways) and on people at their places of work.
- Adverse effects on the character and quality of national and local landscape designations.
- Adverse effects on the character and quality of local landscape character areas.

4.20.2 For the operational phase, Table 10-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Adverse visual effects on residents at home.
- Adverse visual effects on users of the Thames Path (National Trail), National Cycling Routes, other public rights of way, and public open space.
- Adverse visual effects on leisure users of recreational facilities (such as moorings, fishing lakes, sailing lakes, watersports lakes, Thorpe Park and golf courses).

- Adverse visual effects on users of public highways (i.e. motorways, roads and railways) and on people at their places of work.
- Adverse or beneficial effects on the character and quality of local landscape designations (i.e. Areas of Local Landscape Importance).
- Adverse or beneficial effects on the character and quality of undesignated landscape character areas.
- Beneficial effects to public access and public realm.

4.21 Sub-section 10.4 (p.90) outlines the assessment methodology that would be followed for effects on landscape character and visual amenity, and sub-section 10.5 (p.90) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

4.E.2 The relevant planning authorities & consultee comments & advice

4.22 The relevant planning authorities recommend that the submitted environmental statements must take account of the advice provided by Surrey County Council's landscape architect (see below). Full details of that advice are given in Appendix A to this Scoping Opinion.

4.22.1 The assessment should follow the 'Guidelines for Landscape & Visual Impact Assessment' (3rd Edition, 2014), published by the Landscape Institute and the Institute of Environmental Management & Assessment (IEMA). The likely significant effects of the development on both landscape character and visual amenity should be assessed, to include its impact on the connectivity of the Thames Valley landscape.

4.22.2 A local landscape character study will be required to identify key characteristics of the site over the full extent of the river corridor/floodplain affected by the development. The starting point for that process will be the relevant national and county / borough level character assessments, but as these studies are at a regional scale a more localised character study should be carried out at an appropriate local scale, in accordance with the methodology set out in the character assessment guidance published by Natural England in 2012 and 2015.

4.22.3 The assessment of the development's effects on views and visual amenity, should identify the sensitive visual receptors likely to be affected. The selection and assessment of key viewpoints should include a representative selection from the Public Rights of Way network, and all viewpoints should be agreed with the relevant planning authority. Worst case scenario/winter views should also be considered. As development is proposed within a landscape that is a

riverine corridor, the visual effects could be interconnected and should be considered through the whole catchment/corridor.

4.22.4 In view of the scale of the development the proponent will need to look at cumulative impacts and resulting effects over the whole range of schemes proposed, to satisfy both guidance and cross boundary concerns from a borough and county perspective. The proposed development cannot simply be broken up in to separate applications for each Planning Authorities area, without looking at the whole, as this is likely to result in artificially minimizing the overall effect of the scheme on the landscape.

4.22.5 Where significant adverse effects are identified, the environmental statement should identify a comprehensive package of mitigation, highlighting any cross cutting issues of landscape with ecology and with other any other mitigation required such as noise and visual attenuation, soil movement, lighting, access, drainage and phasing. Alternative ways of working and different types of cumulative effects should be considered, and at different stages of the projects life cycle. Consideration should be given to the inter-relationship between landscape and ecology mitigation, and a combined landscape and ecology mitigation plan prepared. This should include the proposals and links with surrounding green infrastructure. There would need to be a hierarchy of mitigation which looks at the scheme as a whole, and then works down the scale looking at each different part, or parts of the scheme.

4.F Natural Resources & Waste

4.F.1 The information provided by the proponent

4.23 Sub-section 11.2 (Baseline Information, pp.91-94) of Section 11 (Natural Resources & Waste, pp.91-97) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of mineral production, and minerals planning policy, and of existing and former waste management facilities (landfills).

4.23.1 Paragraphs 11.2.1.1 to 11.2.1.22 (pp.91-94) provide an account of baseline conditions across the area of land that would be affected by the proposed scheme in terms of past and planned mineral extraction, mineral safeguarding, and historic landfill.

4.23.2 Sub-section 11.2.2 (p.94) provides a brief account of likely future changes to the baseline situation, in respect of mineral working and mineral site restoration.

4.24 Sub-section 11.3 (pp.94-96) identifies the potential impacts of the proposed scheme on natural resources and waste, which are summarised for the construction and operational phases of the scheme in Table 11-3 (pp.95-96).

4.24.1 For the construction phase, Table 11-3 reports that the scheme is not expected to give rise to any significant impacts, and concludes that further assessment is not required for:

- The excavation of waste from closed landfill sites.
- The excavation of primary aggregates from those sections of the proposed channel that would pass through natural ground.
- The natural resource and energy demands associated with the project.
- The generation of waste as a consequence of the construction of the scheme.

4.24.2 For the operational phase, Table 11-3 reports that the scheme is not expected to give rise to any significant impacts, and concludes that further assessment is not required for:

- The use of energy and materials in the maintenance of the scheme and associated facilities.
- The sterilisation of mineral resources within defined Mineral Safeguarding Areas.
- Reductions in the risk of flooding to which Mineral Safeguarding Areas are exposed.

4.25 Sub-section 11.4 (p.97) reports that the topic has been scoped out of the assessment, and sub-section 7.5 (p.39) identifies the assumptions that underpinned the scoping assessment and judgement.

4.F.2 The relevant planning authorities & consultee comments & advice

4.26 The relevant planning authorities recommend that the submitted environmental statements must take account of the advice provided by the Environment Agency (see below). Full details of that advice are given in Appendix A to this Scoping Opinion.

4.26.1 The impact of the proposed development on minerals and waste should be scoped into the environmental assessment process. The scoping request report makes reference to the scheme generating large quantities of waste, including contaminated material, but does not attempt to quantify the amounts that would be generated, or provides details of the ways in which it would be

managed or disposed. Consequently it is not possible to conclude that the impacts of the scheme on waste generation would not be significant.

4.27 Surrey County Council, in its capacity as minerals and waste planning authority for the county of Surrey, recommends that the EIA process include assessment of the likely impacts of the proposed development on existing waste management capacity, and on the restoration of former mineral workings.

4.27.1 The likely impact on remaining licensed non-inert landfill capacity in Surrey and the surrounding mineral and waste planning authority areas should be assessed as part of the EIA process. In line with the waste hierarchy, landfill capacity for non-inert waste is progressively diminishing across the south east of England, and the excavation of material from closed landfills, which is likely to require disposal at appropriately licensed facilities, will have an impact on that remaining capacity. The proponent must provide an assessment of the amount of waste material that would arise from the proposed excavations that would require re-disposal by landfilling, and of the likely implications for the capacity of the receiving landfill sites.

4.27.2 The proponent has indicated that some of the waste material and spoil arising from excavation of the proposed flood alleviation channels would be disposed of by deposit on areas of land that have been identified as potential 'landscape enhancement areas'. The scoping request report does not quantify the amount of material that would require disposal, or the proportion of that material that would be considered inert. Within Surrey, and in particular in the area of north west Surrey in which the proposed flood alleviation scheme would be located, there are numerous mineral workings and former mineral workings that are undergoing progressive restoration, for which inert fill is required. The EIA process should include an assessment of the likely impact on the restoration of former mineral workings of the diversion of potential inert fill material to the proposed 'landscape enhancement areas'.

4.G Population (including Noise, Vibration & Land Use)

4.G.1 The information provided by the proponent

4.28 Sub-section 12.2 (Baseline Information, pp.98-105) of Section 12 (Population (including Noise, Vibration & Land Use, pp.98-117) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of population and health, flood risk, existing land use, recreation and tourism, and noise and vibration.

4.28.1 Sub-section 12.2.1 (p.98) gives a brief overview of the baseline situation for the area of land that would be affected by the proposed flood alleviation scheme in respect of fluvial flood risk. It is reported that an estimated 15,000 homes and businesses between Datchet (Royal Borough of Windsor & Maidenhead) and Shepperton (Spelthorne Borough Council) are at risk from fluvial flooding, of which some 4,700 homes line within the 1 in 20 year (5%) area of risk.

4.28.2 Sub-section 12.2.2 (pp.98-100) gives a brief overview of the range of land uses that are currently encountered across the area that would be affected by the proposed flood alleviation scheme. Those land uses include urban development, reservoirs and lakes formed from past mineral working, and areas of former landfill.

4.28.3 Sub-section 12.2.3 (pp.100-101) and Table 12-1 (p.101) give a brief overview of baseline conditions for the area of land that would be affected by the proposed development with reference to the characteristics of the resident population, and the health profile of that population.

4.28.4 Sub-section 12.2.4 (pp.102-104) gives an account of the recreation and tourism uses that are made of land within the area that would be affected by the proposed development.

4.28.5 Sub-section 12.2.5 (p.104) gives a brief account of the baseline situation with respect to background noise levels and the incidence of vibration, noting the presence and impact of major motorways (M3 and M25) and of Heathrow Airport.

4.28.6 Sub-section 12.2.6 (pp.104-105) provides a brief account of likely future changes to the baseline situation, in respect of flood risk, land use, population and health, recreation and tourism, and noise and vibration.

4.29 Sub-section 12.3 (pp.106-115) identifies the potential impacts of the proposed scheme on flood risk, land use, population and health, recreation and tourism, and noise and vibration, which are summarised for the construction and operational phases of the scheme in Table 12-3 (pp.107-115).

4.29.1 For the construction phase, Table 12-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Temporary adverse effect of increase in flood risk to homes and businesses.
- Temporary adverse effect on commercial businesses from loss / disturbance of land, effects on land, drainage patterns, etc.

- Temporary adverse effect on air quality and odour through release of landfill gases with potential implications for the health of local communities and associated effects on livelihoods of commercial businesses.
- Temporary adverse effects of dust and particulate matter generated from construction activities leading to a reduction in air quality with potential implications for the health of local communities in close proximity to construction working areas or access routes.
- Temporary adverse effect of traffic congestion from construction plant on local roads causing disturbance and stress to local communities.
- Temporary adverse effects to recreation in lakes and rivers (such as commercial and club-based fishing, swimming, diving and sailing) through construction disturbance.
- Temporary adverse effect of noise and vibration from construction plant on local roads causing disturbance to local communities.
- Temporary adverse effect of noise and vibration causing a disturbance to local communities in close proximity to construction areas.

4.29.2 For the operational phase, Table 12-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Beneficial effect on reducing flood risk in the study area, with subsequent beneficial effects on the safety and wellbeing of local communities and businesses.
- Adverse effects on commercial businesses (such as farming and lake based businesses) from permanent loss/disturbance of land, effects on land drainage, etc.).
- Adverse effect on local residents by overlook from the 'beacons' to private residential properties.
- Potential of permanent adverse effect on water quality of lakes from the introduction of River Thames water to previously unconnected lakes, with subsequent adverse effects upon the commercial use of those lakes.
- Potential beneficial and/or adverse effects on traffic movements on roads, public transport services and existing parking facilities could case disturbance and stress to local communities.
- Beneficial increase in public access (e.g. footpaths, cycle ways, navigable sections of flood relief channel) and provision of recreational facilities (e.g. moorings, fishing, bird watching, and visitor facilities).

- Potential of permanent adverse effect on water quality of lakes from the introduction of River Thames water to previously unconnected lakes, with subsequent adverse effects upon the recreational opportunities available for the public.

4.30 Sub-section 12.4 (pp.116-117) outlines the assessment methodologies that would be followed for flood risk (sub-section 12.4.1, p.116), land use (sub-section 12.4.2, p.116), population, health, recreation and tourism (sub-section 12.4.3, pp.116-117), and noise and vibration (sub-section 12.4.4, p.117). Sub-section 7.5 (p.117) identifies the limitations that would be expected to affect the assessments and the assumptions that would be made in the course of the assessments.

4.G.2 The relevant planning authorities & consultee comments & advice

4.31 The relevant planning authorities recommend that the submitted environmental statements provide the following information in respect of the topic of noise and vibration.

4.31.1 Baseline noise measurement surveys should be undertaken at a number of locations around the areas of land that would be affected by the proposed development. Measurement locations should be agreed with the relevant planning authority before being deployed. It is considered that, as a minimum, survey positions should consider the nearest noise sensitive receptors (NSRs) to the north, south, east and west. Surveys should accord with the guidance provided in British Standard (BS) 7445-2:1991 '*Description & measurement of environmental noise – Part 2: Guide to the acquisition of data pertinent to land use'*. Measurements should be long term and cover a minimum of seven consecutive days. Where practical to do so, attended short-term measurements should be undertaken at points around the proposed site in order to determine the spatial variation in sound levels.

4.31.2 For the construction phase, the noise and vibration effects of the proposed development on existing NSRs, should be assessed following BS 5228-1:2009+A1:2014 '*Code of practice for noise & vibration control on construction & open sites – Part 1: Noise'*, BS 5228-2:2009+A1:2014 '*Code of practice for noise & vibration control on construction & open sites – Part 2: Vibration'*, and relevant local policy. Particular attention should be directed to the effects of the proposed piling works on the amenity of nearby residential properties. The assessment should contain a quantitative assessment of the noise effects of the changes in traffic flow characteristics on the local road network, as associated with the construction of the proposed development, on existing NSRs but this should only be necessary if noise changes are likely to be in excess of 1 dB on any link. The construction traffic assessment should follow the guidance

contained within the *'Calculation of Road Traffic Noise'* (CRTN), the Design Manual for Roads & Bridges (DMRB) and relevant local policy. The assessment must demonstrate that noise impact at the nearest identified NSRs from the construction phase of the proposed scheme is below LOAEL.

4.31.3 For the operational phase, the assessment should consider the potential noise impact of the maintenance and use of the flood alleviation channels and associated facilities on residential receptors. The noise impact should be considered based on the noise criteria given in the WHO 'Guidelines for Community Noise 1999'. The assessment should contain a quantitative assessment of the noise effects of the changes in traffic flow characteristics on the local road network, as associated with the proposed development, on existing NSRs but this should only be necessary if noise changes are likely to be in excess of 1 dB on any link. The operational traffic assessment should follow the guidance contained within the 'Calculation of Road Traffic Noise' (CRTN), the Design Manual for Roads and Bridges (DMRB) and relevant local policy.

4.H Soils & Geology (including Contaminated Land)

4.H.1 The information provided by the proponent

4.32 Sub-section 13.2 (Baseline Information, pp.118-120) of Section 13 (Soils & Geology (including Contaminated Land), pp.118-124) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of the underlying geology, soils and land contamination.

4.32.1 Sub-section 13.2.1 (pp.118-119) provides a brief account of the bedrock and superficial deposit geology that underlies the areas of land that would be affected by the proposed development. The bedrock geology is comprised of a combination of the London Clay, the Claygate Member, and the Bagshot Formation across the majority of the area that would be affected by the proposed development, with a small area in the north west underlain by the Lambeth Group (clay, silt and sand sedimentary deposits). The superficial deposits geology is predominantly formed of gravels.

4.32.2 Sub-section 13.2.2 (p.119) provides a brief account of background conditions in terms of the soils found across the area of land that would be affected by the proposed development. At the upstream end of section 1 of the channel the soils are free draining, slightly acidic and base rich, shifting to free draining, slightly acidic loamy soils for most of section 1, the west of section 2 and the north of section 3, and becoming loamy and clayey with naturally high groundwater for the remainder of the area affected by the proposed scheme.

4.32.3 Sub-section 13.2.3 (p.119) provides an account of the likelihood of contaminated land being encountered within the area affected by the proposed development. The area has been subject to a range of potentially contaminative activities in the past, including landfilling, industrial and commercial uses, and agriculture. Contaminants identified in the area include, hydrocarbons, heavy metals, volatile organic compounds, and asbestos.

4.32.4 Sub-section 13.2.4 (p.119) provides a brief account of likely future changes to the baseline situation, which concludes that those conditions are unlikely to change.

4.33 Sub-section 13.3 (pp.120-123) identifies the potential impacts of the proposed scheme on soils, hydrogeology and contaminated land, which are summarised for the construction and operational phases of the scheme in Table 13-3 (pp.121-123).

4.33.1 For the construction phase, Table 13-3 reports that the scheme is not expected to give rise to any significant impacts, which would need to be covered in the assessment.

4.33.2 For the operational phase, Table 13-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Landfill leachate reaching uncontaminated soil close to landfill site and affecting its quality.

4.34 Sub-section 13.4 (p.124) outlines the assessment methodology that would be followed for soils, hydrogeology and contaminated land, and sub-section 13.5 (p.124) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

4.H.2 The relevant planning authorities & consultee comments & advice

4.35 The relevant planning authorities recommend that the submitted environmental statements must provide the following information in respect of the excavation of areas of contaminated or potentially contaminated land.

4.35.1 The area of land that would be affected by the proposed developments includes closed licensed landfills and closed historic landfill, which in the latter cases date from an era before current environmental and regulatory legislation and operated on a dilute and dispense basis. They would not have any modern engineered containment, leachate control or gas management to prevent potential environmental impacts.

4.35.2 The ground investigations that have been carried out to date confirm that there is a contamination hazard in soil, groundwater / leachate and landfill gas. Procedures for the Management of Land Contamination are set out in Contaminated Land Report 11 (CLR 11) published by DEFRA and Environment Agency. The process is summarised in the attached Figure 1 from that document, and should be followed by the Applicants and their Professional Teams.

4.35.3 As the development of these sites could give rise to significant environmental effects, the full process of ground investigation, risk assessment, options, appraisals and preparation of a mitigation and remediation strategy will be needed to support each planning application where the excavation for landfill is proposed, and to inform the supporting environmental statement in each case. In each case the mitigation and / or remediation strategy will need to be developed to the stage where the environmental impacts of implementing the strategy can be assessed as part of the EIA process. The planning applications and their supporting environmental statements cannot be adequately informed by desk based assessment alone, and intrusive ground investigations and Tier 2 contaminated land risk assessments will be required. Receptors for consideration in both the risk and impact assessments include human health, groundwater, surface water, ecology and buildings.

4.36 The scope and methodology of all investigations and risk assessments will need to be agreed with the relevant planning authority (in respect of human health and other receptors) for the application in question, and the Environment Agency (in respect of the controlled waters receptor) before any works are undertaken.

4.37 The relevant planning authorities recommend that the submitted environmental statements must take account of the advice provided by Natural England (see below). Full details of that advice are given in Appendix A to this Scoping Opinion.

4.37.1 The impact of the proposed development on agricultural land of ALC categories 1, 2 and 3a should be assessed. The relevant planning authorities note that the issue of agricultural land quality is not addressed in the proponents scoping request report, and would agree with Natural England that the question needs to be covered, particularly for those sections of the proposed flood alleviation channel that would cut through natural ground.

4.37.2 The impact of the proposed development on soils should be assessed in a way that takes account of the ecosystem services that they provide. The relevant planning authorities note that the consideration of the impacts of the development on soils is limited to the question of leachate migration from

landfill, and that the potential for impacts arising from the deposition of excavated material and the re-profiling of land as part of the construction of the proposed 'landscape enhancement areas' has been discounted. Given the scale and extent of the proposed 'landscape enhancement areas' the relevant planning authorities would expect the impact of soil importation, deposit and re-profiling on the physical and chemical properties of both the indigenous and imported soils to be considered as part of the assessment.

4.I Surface Water, Groundwater & Water Framework Directive

4.I.1 The information provided by the proponent

4.38 Sub-section 14.2 (Baseline Information, pp.125-130) of Section 14 (Surface Water, Groundwater & Water Framework Directive, pp.125-138) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of surface water, hydromorphology, groundwater, and flood risk.

4.38.1 Sub-section 14.2.2 (pp.125-127) provides an account of baseline conditions in the area that would be affected by the proposed development with reference to surface water bodies. A total of21 surface waterbodies that are subject to monitoring under the Water Framework Directive are identified as being located within the study area (paragraph 14.2.23, p.126). Paragraph 14.2.2.4 (p.127) reports that the project would be situated within an area that is designated as a surface water safeguarding zone, which is currently classed as 'at risk'. Paragraph 14.2.2.5 (p.127) and Table 14-3 (p.127) provide details of licensed surface water abstractions that are situated within the area affected by the proposed scheme.

4.38.2 Sub-section 14.2.3 (p.128) provides an account of baseline conditions in the area that would be affected by the proposed development with reference to the hydromorphology of the River Thames, and the three tributaries (Datchet Common Brook, Horton Brook, the Abbey River) that would be intersected by the proposed flood alleviation channels.

4.38.3 Sub-section 14.2.4 (p.128-129) provides an account of baseline conditions in the area that would be affected by the proposed development with reference to groundwater. Paragraphs 14.2.4.1 to 14.2.4.4 (pp.128-129) report on the groundwater resources that underlie the affected area of land, with paragraphs 14.2.4.7 to 14.2.4.9 (p.129) giving an overview of the condition of those resources. The relationship of the proposed flood relief channels to groundwater Source Protection Zones and groundwater bodies that are

monitored under the Water Framework Directive is discussed in paragraph 14.2.4.10 (p.129).

4.38.4 Sub-section 14.2.5 (p.130) provides an account of baseline conditions in the area that would be affected by the proposed development with reference to fluvial flood risk. The issues of surface water and groundwater flood risk are not addressed.

4.38.5 Sub-section 14.2.6 (p.130) provides a brief account of likely future changes to the baseline situation, which concludes that the scheme offers opportunities to potentially improve the condition of the groundwaters.

4.39 Sub-section 14.3 (pp.130-137) identifies the potential impacts of the proposed scheme on surface water, groundwater, flood risk and Water Framework Directive compliance, which are summarised for the construction and operational phases of the scheme in Table 14-3 (pp.131-137).

4.39.1 For the construction phase, Table 14-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Potential adverse effect to humans, flora and fauna and water of increasing flood risk by creation of additional areas of hardstanding and from stockpiling material in the floodplain.
- Potentially adverse effect of change in groundwater flow and pathways from compacting existing landfills.

4.39.2 For the operational phase, Table 14-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Beneficial effects on humans, flora and fauna and water of reducing flood risk in the study area.
- Potential adverse and beneficial effect n the hydromorphology of WFD and non-WFD lakes.
- Increased diversity of water dependent habitat will have a beneficial effect on hydromorphology and biology of WFD and non-WFD surface water.
- Potential adverse effect on the flow, hydromorphology , water quality and biological conditions of rivers (WFD, non-WFD and within surface water safeguard zones) intersected by the flood relief channel through operation of the Project due to potential differences in flows, water quality and biological conditions of the flood relief channel and the downstream sections of these rivers.

- Potential for adverse effect on water quality of WFD and non-WFD lakes from the introduction of River Thames water (in normal conditions and during floods) to previously unconnected lakes.
- Potential adverse effect on groundwater quality by altering the groundwater flow regime and creating new pathways for contaminants.

4.40 Sub-section 14.4 (p.138) outlines the assessment methodology that would be followed for the assessment of impacts on surface waters, groundwaters, flood risk, and for Water Framework Directive compliance. Sub-section 14.5 (p.138) identifies the limitations that would be expected to affect the assessments and the assumptions that would be made in the course of the assessments.

4.I.2 The relevant planning authorities & consultee comments & advice

4.41 The relevant planning authorities recommend that the submitted environmental statements must take account of the advice provided by the Environment Agency and Transport for London (see below). Full details of that advice are given in Appendix A to this Scoping Opinion.

4.41.1 The Environment Agency noted that an environmental statement, associated flood risk assessment and detailed hydraulic flood modelling will be submitted by the proponent to demonstrate that flood risk will not be increased elsewhere, both during the construction and operational phrases of the scheme. However, they advised that the proponent should be aware that flood water storage compensation may also be required for any work or storage compounds and that these should also be assessed, and if required mitigated, within the applications that are submitted and their accompanying assessments.

4.41.2 Transport for London advised that they would be interested in measures designed to minimise impacts on rail infrastructure, the highway network and transport operations and to mitigate any negative impacts, both during construction and in operation. In particular, London Underground Infrastructure Protection would want to see further details of areas that may be affected by flooding during construction works in order to update contingency plans. An evaluation of the long term capacity improvements would enable flood risk assessments for the London Underground network to be updated.

4.42 Due to the nature and scale of the developments proposed we would expect a detailed Flood Risk Assessment (FRA) to be produced for each site. The FRA should consider all sources of flooding, including surface water, establish the baseline flood risk using all available published sources and supplemented by site specific surveys where necessary. The impact of climate change should be considered in accordance with the latest EA

guidance. The FRA should include details of any mitigation proposed for the facilities that would be constructed as part of the wider scheme, including floor and key infrastructure levels, flood flow routes, flood storage and access and egress. The flood risk chapter of each environmental statement should cover the construction and operational phases of the development. In each case the FRA can form a technical appendix to the environmental statement.

4.J Traffic & Transport

4.J.1 The information provided by the proponent

4.43 Sub-section 15.2 (Baseline Information, pp.139-145) of Section 15 (Traffic & Transport, pp.139-150) of the scoping request report provides a description of the baseline situation for the area that would be affected by the development in respect of existing road and rail infrastructure, air transport and associated road traffic, and waterways navigation.

4.43.1 Sub-section 15.2.1 (pp.139-141) provides an account of baseline conditions in the area that would be affected by the proposed development with reference to the existing road and rail network. Key aspects of road and rail infrastructure in the affected area are identified, and background information is provided on annual average daily traffic flows on the major roads in the area.

4.43.2 Sub-section 15.2.2 (p.141) provides an account of baseline conditions in the area that would be affected by the proposed development with reference to airport infrastructure and the road traffic that such facilities generate. The presence of Heathrow Airport in close proximity to the route of the proposed flood alleviation scheme is acknowledged, and the surface transport links that serve the airport are identified.

4.43.3 Sub-section 15.2.3 (pp.141-144) provides an account of baseline conditions in the area that would be affected by the proposed development with reference to the network of navigable waterways, which focuses on the River Thames.

4.43.4 Paragraphs 15.2.3.3 to 15.2.3.27 (pp.144-145) provide an account of baseline transport infrastructure and traffic conditions for each of the major components of the proposed scheme.

4.43.5 Sub-section 15.2.4 (p.145) provides a brief account of likely future changes to the baseline situation, which concludes that the scheme offers opportunities to potentially improve the condition of the groundwaters.

4.44 Sub-section 15.3 (pp.145-149) identifies the potential impacts of the proposed scheme on traffic and transport which are summarised for the construction and operational phases of the scheme in Table 15-3 (pp.146-149).

4.44.1 For the construction phase, Table 15-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Temporary adverse effect of increase in flood risk to local and regionally important roads.
- Increased traffic on local roads, as well as regionally (A-roads) and nationally (motorways) important roads, causing a potential adverse effect on traffic congestion, journey times and the condition of local roads.
- A large number of construction site personnel will need to access the working areas in order to construct the Project, resulting in potential adverse effect on traffic congestion, journey times and the condition of local roads.
- Potential adverse effect (temporary closure between Staines station and Windsor and Eton Riverside station) on the Windsor and Eton Riverside to London Waterloo railway line.
- Potential adverse effect (temporary closure/diversion due to flood relief channel excavation) on local roads (e.g. Littleton Lane, Chertsey Road, Ferry Lane Road, B375, B376 and B3021), as well as on regionally (e.g. A308, A310, A320) and nationally (e.g. M3, M25) important roads.

4.44.2 For the operational phase, Table 15-3 reports that the scheme is expected to give rise to the following significant impacts, which would be covered in the assessment:

- Potential beneficial effect of reduced disturbance to use of rail, and local, national and regionally important roads during times of flood.
- Potential beneficial and/or adverse effects on traffic movements on roads, public transport services and existing parking facilities.

4.45 Sub-section 15.4 (p.150) outlines the assessment methodology that would be followed for traffic and transport effects, and sub-section 15.5 (p.150) identifies the limitations that would be expected to affect the assessment and the assumptions that would be made in the course of the assessment.

4.J.2 The relevant planning authorities & consultee comments & advice

4.46 The relevant planning authorities recommend that the submitted environmental statements must take account of the advice provided by Highways England, Transport for London, Surrey County Council in its capacity as highway authority for Surrey, and Heathrow Airport (see below). Full details of that advice are given in Appendix A to this Scoping Opinion.

4.46.1 Highways England advises that it is interested in the potential impact that the capacity improvements and flood channel project might have on the M3, M4 and M25 motorways, or any maintenance activities related to them. The assessment should address the question of the effect of the proposed works on the safety of the strategic road network, particularly in terms of changes to the frequency or duration of queues. A range of visitor facilities, habitat creation areas and public open spaces are proposed as part of the scheme, and Highways England would be concerned with the potential additional trips these sites could create on the SRN. The Transport Assessment should provide up-to-date traffic data for the key routes likely to be affected by construction and operation traffic, which should be in modelling to examine the impact of the project. The proposal to project the number of vehicle movements required during construction, the number of operatives active on site at any one time during construction, to identify all temporary or permanent diversions or closures of roads and rail required, and to project the numbers of visitors that might utilise the new public open spaces once the project is operational is welcomed.

4.46.2 Transport for London advised that they would be interested in measures designed to minimise impacts on rail infrastructure, the highway network and transport operations and to mitigate any negative impacts, both during construction and in operation. In particular, London Underground Infrastructure Protection would want to see further details of areas that may be affected by flooding during construction works in order to update contingency plans. An evaluation of the long term capacity improvements would enable flood risk assessments for the London Underground network to be updated.

4.46.3 Surrey County Council, in its capacity as highway authority for Surrey, has advised that the EIA should give consideration to the potential impact of this development on the surrounding transport network and land uses with particular regard to HGV movements and should include the following:

- A preliminary design of the site accesses and vehicle turning/parking area within the site compounds to ensure that the space within them can accommodate all associated vehicles and, that these vehicles will enter and exit the site compounds in a forward gear.
- Details of the proposed mitigation methods to prevent, reduce or offset any adverse impact to the highway/transport infrastructure, and assessment of the effectiveness of any proposed mitigation measures.
- A full Transport Assessment report encompassing details of methodologies used to carry out the associated traffic appraisal and demonstrating that a significant proportion of materials/waste/spoils would be transported by barges on River Thames. Daily profile of vehicle movements confirming that vehicle movements are not unnecessarily concentrated on peak traffic hours (08.00-09.00hrs and 17.00-18.00hrs). The proposed traffic surveys should also cover the sections of 'B' roads that are likely to be affected.
- A Travel Plan document incorporating actions that are aimed at minimising the number of site operators' vehicles accessing/exiting this site.
- A traffic management plan including the necessary traffic regulation orders relating to the diversion of vehicular traffic.
- A full construction traffic management plan (CTMP) with special consideration given to the sensitivity of this location (e.g. pedestrian activities relating to visitors and recreational use of River Thames), consolidation/timing of deliveries, sheeting of lorries and incorporating a routing plan showing that construction vehicles would avoid residential streets as far as it is practicable.

4.46.4 Heathrow Airport has provided a number of comments on alterations that have been proposed to the scheme to address the issue of safeguarding aircraft from the risk of birdstrike. The critical areas to the airport in terms of hazardous birds and the risk of strikes are generally limited (but not exclusive to) the first 6.6 kilometre section of the proposed flood alleviation channel, and the associated areas of habitat that would be created. Development of a management plan for breeding geese for section 2 and section 3 of the proposed flood alleviation channel is recommended, as is the development of a Bird Hazard Management Plan for the construction phase of the project.

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Appendix A

Organisations & Bodies Consulted under Regulation 15 of the EIA Regulations

&

Register of Responses

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Appendix A Organisations & Bodies Consulted & Register of Responses

A-1 Organisations & Bodies Consulted & Responses Received

A.1 The organisations and bodies listed below were formally consulted as part of the Regulation 15 Scoping Opinion preparation process, and responded to the consultation.

- Environment Agency – no response received on 22 August 2017. Full details are recorded in section A-2.1.
- Historic England – response received on 21 August 2017. Full details are recorded in section A-2.2.
- Natural England– response received on 8 August 2017. Full details are recorded in section A-2.3.
- Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust – response received on 18 August 2017. Full details are recorded in section A-2.4.
- Greater London Authority – response received on 16 August 2017. Full details are recorded in section A-2.5.
- Heathrow Airport Ltd – response received on 21 August 2017. Full details are recorded in section A-2.6.
- Highways England – response received on 18 August 2017. Full details are recorded in section A-2.7.
- Surrey County Council Archaeology – response received on 18 August 2017. Full details are recorded in section A-2.8.
- Surrey County Council Ecology – response received on 14 August 2017. Full details are recorded in section A-2.9.
- Surrey County Council Highway Authority – response received on 22 August 2017. Full details are recorded in section A-2.10.
- Surrey County Council Historic Buildings – response received on 3 August 2017. Full details are recorded in section A-2.11.
- Surrey County Council Landscape – response received on 28 July 2017. Full details are recorded in section A-2.12.
- Sport England – response received on 10 July 2017. Full details are recorded in section A-2.13.
- Surrey Gardens Trust – response received on 14 July 2017. Full details are recorded in section A-2.14.

- Surrey Wildlife Trust – response received on 11 August 2017. Full details are recorded in section A.2-15.
- Transport for London – response received on 17 August 2017. Full details are recorded in section A.2-16.
- Runnymede Borough Council's environmental health officer – response received on 4 July 2017. Full details are recorded in section A.2-17.
- Runnymede Borough Council's contaminated land officer – response received on 4 July 2017. Full details are recorded in section A.2-18.

A-2 Register of Responses Received to the Regulation 15 Scoping Opinion Consultation

A-2.1 Environment Agency

A.2 The Environment Agency provided the following advice in correspondence (EA ref.WA/2017/124224/01-L01) dated 18 August 2017.

> "Thank you for consulting us on the EIA scoping request noted above. We have reviewed the submitted scoping report, dated June 2017 with regards to our remit. We wish to provide the following comments & points of information for your reference.
>
> Generally, we agree with the issues & topics that are proposed to be scoped into the Environmental Statement.
>
> **Natural Resources & Waste**
>
> However, paragraph 11.2.3.1 of the submitted scoping report identifies the key environmental constraints with regards to 'Natural Resources & Waste'. However, only 'the potential need for land take from existing minerals extraction sites, MSAs [mineral safeguarding areas] & landfill sites' have been identified.
>
> We acknowledge that the inter-linkages between waste during construction & other topics such as water, population, air quality & traffic have been identified in the relevant chapters. However, on several occasions it is noted within Table 11-1 ('potential effects during construction & operation') that the scheme 'will produce a large quantity of waste material', some of which may be 'contaminated waste' but does not provide any indication of the quantities involved or reference what the potential material will be reused for, etc. Therefore, it is difficult to conclude at this time if the proposed scheme will have a potential adverse impact on the environment with regards to waste.
>
> We welcome that the scheme proposes to produce a waste recovery plan & intends 'the ongoing process of iterative design is likely to further reduce the volumes of excavated materials & waste in accordance with the principles of the waste hierarchy' (paragraph 11.5.1.4), However, without further evidence of the quantities & potential reuses or disposal of material, we lack suitable reassurance that the proposed development will not have an adverse impact on waste. **Consequently we would suggest that the proposed development's impact on minerals & waste be scoped into the Environmental Statement for assessment.**

Points of Information

a) Paragraph 11.2.1.4 & associated references – Following the dissolution of Berkshire County Council in 1998 the Royal Borough of Windsor & Maidenhead (RBWM) became an unitary authority. Therefore the RBWM has the responsibility for waste policy in this locality. However, we acknowledge that some of the former Berkshire County Council's local planning authorities continue to work together on a joint mineral & waste plan for their respective areas.

b) A juridical review relating to Ham Hydro power scheme highlighted that Teddington Lock is considered Metropolitan Open Land (MLO). This designation does not seem to have been noted within the submitted scoping report & may have a relevance in any future scoping report or Environmental Statement.

c) We acknowledge that an Environmental Statement, associated flood risk assessment & detail hydraulic flood modelling will be submitted to demonstrate that flood risk will not be increased elsewhere, both during the construction & operational phrases of the scheme. However, we would like to highlight to the applicant at this time that flood water storage compensation may also be required for any work or storage compounds & that these should also be assessed and if required mitigated within any future application."

A-2.2 Historic England

A.3 Historic England provided the following advice in correspondence (HE ref.PL00136895) dated 21 August 2017.

"Advice

The proposal is for the creation of new & enhanced flood defences across the Thames flood plain between Windsor & Teddington. The main components of the project include: a 14.6km flood relief channel (split into three sections); capacity improvement works at Desborough Cut, Sunbury, Molesey, & Teddington Weirs; a flood storage area at Ham Lands; modifying the Thames Water abstraction regime from the River Thames; & associated features to include flow & water level control structures, flood embankments, site compounds, materials processing sites, Landscape Enhancement Areas, & areas of habitat creation.

The scoping report, & our assessment of the project proposal, indicates that the development has the potential to impact upon both designated & non-designated heritage assets & their settings, both within the boundary of the development area itself & in the wider area surrounding it. In line with the advice in the National Planning Policy Framework (NPPF), we would expect the Environmental Statement to contain a thorough assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of these assets.

Designated heritage assets

Our initial assessment of the Scoping Report shows that the designated heritage assets within the near vicinity of the proposed development have been encompassed within the 500m study area. We note however that given the scale of the development & distance across which it spans, it is likely to be visible across a wide area & could, as a result, affect the significance of heritage assets not only in the immediate vicinity, but those at some distance from the development area itself. We would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included & can be properly assessed. An arbitrary radial search is unlikely to accurately reflect the impact of the development on heritage assets in the wider area & a more tailored approach will be required, in particular with regards to assessing impact to setting.

It is important that the assessment is designed to ensure that all impacts are fully understood. Techniques such as photomontages & computer generated views analysis imagery are a useful part of this. This would be particularly important as there needs to be an understanding of the impact on the ***setting*** of the Scheduled Monuments & listed buildings affected, as well as the character & appearance of Conservation Areas, & Parks & Gardens of Special Historic Interest. It would be important that the setting of heritage assets is fully understood & also the contribution the setting makes to the significance of the assets. In this respect an analysis of the views from within, out of, & across the areas affected will be important.

With regard to designated heritage assets there needs to be an understanding of what makes these assets 'special'. Significance can be harmed or lost through alteration or destruction of the heritage asset or through development within its setting, so it needs to be demonstrated how this proposal would impact on character & significance. An integrated approach to assessment is required for this project that demonstrates an understanding of how all the individual elements of the historic environment come to together to form a 'special place', & which fully analyses how the development proposals may impact upon the specialness of the areas affected, & the assets within them.

Non-designated heritage assets

We would expect the Environmental Statement to fully consider the potential impacts of the development on non-designated features of historic, architectural, archaeological or artistic interest, since these can also be of national importance & make an important contribution to the character & local distinctiveness of an area & its sense of place. This information is available via the local authority Historic Environment Record (www.heritagegateway.org.uk) & relevant local authority staff.

We note in particular the high probability for the discovery of non-designated archaeological remains within the development areas that cross previously undeveloped land. If any such remains were discovered that directly related to designated heritage assets, they may be deemed to be of equal significance to those protected by national designation. We note in particular the high potential for the discovery of prehistoric archaeological remains on the gravel terraces of this area.

We would strongly recommend that you involve conservation & archaeological staff at the individual Borough Councils, GLAAS, & at Surrey County Council, in the development of this assessment. They are best placed to advise on: local historic environment issues & priorities; how the proposal can be tailored to avoid & minimise potential adverse impacts on the historic environment; the nature & design of any required mitigation measures; & opportunities for securing wider benefits for the future conservation & management of heritage assets.

The assessment should also take account of the potential impact which associated activities (such as construction, servicing, maintenance, & associated traffic) might have upon perceptions, understanding, & appreciation of the heritage assets in the area, both designated & non-designated. The assessment should also consider the likelihood of alterations to drainage & ground water patterns that might lead to in situ decomposition or destruction of below ground archaeological remains & deposits, & can also lead to subsidence of buildings & monuments.

Additional general comments

We provide additional comments below regarding the structure & content of the Scoping Report, but overall are satisfied with the general level of detail within the scoping report with regard to the historic environment.

We are in agreement that cultural heritage, archaeology, & built heritage (section 9) & landscape & visual amenity (section 10) should certainly be included. We emphasise however that an integrated *landscape approach* to assessment of heritage assets is required & should be translated into the report. The wider Thames flood plain has great historic & archaeological importance, & whilst we acknowledge the need to have a logical structure for the environmental statement, if the analysis & reporting of landscape impacts, & heritage & setting impacts become too fragmented, it may not be possible to fully demonstrate the significance of heritage assets & the impact of development upon them.

Detailed pre-application advice has been provided by the Historic England Science Advisor directly to the applicant, & it is expected that geo-archaeological assessment will underpin & tie together the other assessments & investigations relating to the historic environment, & wider landscape. Appropriate focus must therefore be given within the appropriate archaeology chapter of the EIA to this subject. The creation of a geo-archaeological database & deposit model to underpin the baseline assessment will be important, & we would expect to see the detail of geo-archaeological assessment & analysis formed & included as part of the relevant EIA chapter.

Additional site specific comments

Ham Land (comment provided by GLAAS Archaeology Advisor)

The proposals at Ham Land have the potential to result in significant archaeological impact. While we are in agreement that there has been some recent gravel extraction carried out in the area, historic maps & aerial photographs do not provide any conclusive evidence which would suggest that the western half of the northern area has also undergone gravel extraction. Without such evidence it must be assumed that archaeological survival in this part of the Ham Lands site is good. Substantial amounts of prehistoric & Roman finds have been recovered from the area, possibly as a result of the early 20th century quarrying, & there is a risk that the proposed works at Ham Lands could impact upon significant Prehistoric & Roman remains. It is important therefore that the archaeological chapter within the EIA provides a robust assessment of the extent of past gravel extraction which in turn helps to identify the likely level of archaeological survival. The geotechnical works proposed for this area will need to be monitored & reviewed by an archaeologist & geo-archaeologist, to be incorporated into the archaeological assessment/evaluation work as part of the EIA. Targeted evaluation trenches, are also a likely requirement as part of the application.

Once the archaeological impact of the proposal has been appropriately defined a recommendation on archaeology for the London Borough's will be made by GLAAS. If archaeological safeguards do prove necessary, these could involve design measures to preserve remains in situ or where that is not feasible archaeological investigation prior to development.

Abbey Meads

This specific part of Chertsey has great historical importance as it would have formed part of the wider Chertsey Abbey estate. The scheduling boundary of the Abbey reflects the core of the monastic site; however the estate extended well beyond this (arbitrary) boundary, incorporating much of the surrounding landscape to provide support for the Abbey in terms of farming, industry, & trade. This is demonstrated for example, by the medieval ridge & furrow to the north of the core Abbey site which provides evidence of cultivation, & the presence of Abbey Mills which is separate from the main Abbey site. Water management is a particular feature of the Abbey site; the scheduled area contains important archaeological remains of fish ponds, moats, & other water management features, & the Abbey's location & connection with the River is therefore particularly significant.

It will be important therefore, for the EIA chapter to sufficiently characterise the archaeological resource in this area, & adequately reflect the historic connection of this area of land with the Abbey site.

Laleham Burway

The area defined as Laleham Burway includes a scheduled earthwork enclosure in the northern part of the site. The earthwork is the possible site of a temporary Roman marching camp, which is evident from the uniform nature of the enclosure & the rounded corners. The location next to the River Thames may have been of strategic importance. It has also been suggested that it may have been a medieval stock enclosure given the proximity to Chertsey Abbey & the Abbey Meads.

As this area has been identified as a likely candidate for habitat creation, it will be important to adequately characterise the archaeological & heritage resource. An important part of this characterisation will be to understand more about the function & date of the Scheduled Monument, in order to fully understand what the impact of the proposals might be on the site, in particular through development within its setting. This may require investigations across the scheduled area, which will require Scheduled Monument Consent to be obtained from DCMS, as administered by Historic England.

Final comment

During the course of the project so far, Historic England have been providing detailed pre-application advice to the applicant. Given the importance of the heritage assets within the area, we would expect to continue to provide further advice on the development scheme & potential impacts to heritage as the project develops.

Recommendation

We urge you to address the above points, & recommend that production of an Environmental Statement should continue in accordance with national & local policy guidance, & following your expert conservation advice. If you have queries about any of the above, or would like to discuss any aspects further, please contact our team for further advice."

A-2.3 Natural England

A.4 Natural England provided the following advice in correspondence (NE ref.ENV_IMSE500260_0184) dated 19 December 2016.

"Thank you for seeking our advice on the scope of the Environmental Statement (ES) in your consultation dated 06 July 2017 which we received on 06 July 2017.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, & managed for the benefit of present & future generations, thereby contributing to sustainable development.

Case law [Harrison, J in *R. v. Cornwall County Council ex parte Hardy* (2001)] & guidance [*Note on Environmental Impact Assessment Directive for Local Planning* Authorities Office of the Deputy Prime Minister (April 2004)] has stressed the need for a full set of environmental information to be available for consideration prior to a decision being taken on whether or not to grant planning permission. Annex A to this letter provides Natural England's advice on the scope of the Environmental Impact Assessment (EIA) for this development.

Should the proposal be amended in a way which significantly affects its impact on the natural environment then, in accordance with Section 4 of the Natural Environment & Rural Communities Act 2006, Natural England should be consulted again.

Natural England have the following comments on the document we have been consulted upon;

- 4.1.6.4 – Natural England would be pleased to hear more about the projects delivering net gain for biodiversity proposed within this scheme, & would be happy to offer any advice you require on this matter

- 4.2 – In terms of the construction phase, Natural England would need to see that this project is compliant with the various legislation protecting the respective designated sites. We are working proactively with the Environment Agency at the minute, looking at potential operational effects of the scheme, construction is also an important consideration. Namely water pollution; run off; dust; storage of materials, disturbance impacts & machinery required for the works.

- 4.4.1.1 – We would encourage early engagement with Natural England if this project needs to be extended in the future, due to the demands of climate change.

- 8 – Natural England continue to work proactively with the Environment Agency on these issues involved with the designated sites listed below in Annex A. We would ask that both Wraysbury No. 1 Gravel Pits SSSI & Dumsey Meadow SSSI are also added to the list for completeness. We understand the route will not go through either of the SSSIs, but we feel it would be worth noting their existence & explaining why they won't be harmed by this scheme.

- We look forward to seeing drafts of the Habitats Regulations Assessment & Environment Statement, & are happy to continue feeding into this process, to help deliver a sustainable scheme.

- 8.23 – We would like to take this opportunity to draw your attention to our Protected Species Standing Advice, which should help you with a number of species likely to be affected by this scheme. We advise you obtain bespoke advice in relation to the Breeding Bird Assemblages & specific SPA & SSSI notified features.

We would be happy to comment further should the need arise but if in the meantime you have any queries please do not hesitate to contact us. For any queries relating to the specific advice in this letter only please contact Marc Turner on 02080267686. For any new consultations, or to provide further information on this consultation please send your correspondences to consultations@naturalengland.org.uk."

Annex A – Advice related to EIA Scoping Requirements

1. General Principles

Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2011 [revoked as of 16 May 2017], sets out the necessary information to assess impacts on the natural environment to be included in an ES, specifically:

- A description of the development – including physical characteristics & the full land use requirements of the site during construction & operational phases.

- Expected residues & emissions (water, air & soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed development.

- An assessment of alternatives & clear reasoning as to why the preferred option has been chosen.

- A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural & archaeological heritage, landscape & the interrelationship between the above factors.

- A description of the likely significant effects of the development on the environment – this should cover direct effects but also any indirect, secondary, cumulative, short, medium & long term, permanent & temporary, positive & negative effects. Effects should relate to the existence of the development, the use of natural resources & the emissions from pollutants. This should also include a description of the forecasting methods to predict the likely effects on the environment.

- A description of the measures envisaged to prevent, reduce & where possible offset any significant adverse effects on the environment.

- A non-technical summary of the information.

- An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals & a thorough assessment of the 'in combination' effects of the proposed development with any existing developments & current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

2. Biodiversity & Geology

2.1 Ecological Aspects of an Environmental Statement

Natural England advises that the potential impact of the proposal upon features of nature conservation interest & opportunities for habitat creation/enhancement should be included within this assessment in accordance with appropriate guidance on such matters. Guidelines for Ecological Impact Assessment (EcIA) have been developed by the Chartered Institute of Ecology & Environmental Management (CIEEM) & are available on their website.

EcIA is the process of identifying, quantifying & evaluating the potential impacts of defined actions on ecosystems or their components. EcIA may be carried out as part of the EIA process or to support other forms of environmental assessment or appraisal.

The National Planning Policy Framework sets out guidance in S.118 on how to take account of biodiversity interests in planning decisions & the framework that local authorities should provide to assist developers.

2.2 Internationally & Nationally Designated Sites

The ES should thoroughly assess the potential for the proposal to affect designated sites. European sites (e.g. designated Special Areas of Conservation & Special Protection Areas) fall within the scope of the Conservation of Habitats & Species Regulations 2010. In addition paragraph 118 of the NPPF requires that potential SPAs, possible SACs, listed or proposed Ramsar Sites, & any site identified as being necessary to compensate for adverse impacts on classified, potential or possible SPAs, SACs & Ramsar sites be treated in the same way as classified sites.

Under Regulation 61 of the Conservation of Habitats & Species Regulations 2010 an appropriate assessment needs to be undertaken in respect of any plan or project which is (a) likely to have a significant effect on a European site (either alone or in combination with other plans or projects) & (b) not directly connected with or necessary to the management of the site.

Should a 'Likely Significant Effect' on a European/Internationally designated site be identified or be uncertain, the competent authority (in this case the local planning authority) may need to prepare an Appropriate Assessment, in addition to consideration of impacts through the EIA process.

Sites of Special Scientific Interest (SSSIs) & sites of European or international importance (Special Areas of Conservation, Special Protection Areas & Ramsar Sites)

The development site is close to & runs through the following designated nature conservation site(s):

- South West London Waterbodies SPA & Ramsar Site; Wraysbury & Hythe End Gravel Pits SSSI; Thorpe Park No 1 Gravel Pit SSSI; Thorpe Hay Meadow SSSI;

- Further information on the SSSI & its special interest features can be found at www.magic.gov.uk. The ES should include a full assessment of the direct & indirect effects of the development on the features of special interest within these sites & should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant effects.

- Natura 2000 network site conservation objectives are available on our internet site http://publications.naturalengland.org.uk/category/6490068894089216

2.3 Regionally & Locally Important Sites

The EIA will need to consider any impacts upon local wildlife & geological sites. Local Sites are identified by the local wildlife trust, geo-conservation group or a local forum established for the purposes of identifying & selecting local sites. They are of county importance for wildlife or geodiversity. The ES should therefore include an assessment of the likely impacts on the wildlife & geodiversity interests of such sites. The assessment should include proposals for mitigation of any impacts & if appropriate, compensation measures. Contact the local wildlife trust, geo-conservation group or local sites body in this area for further information.

2.4 Protected Species - Species protected by the Wildlife & Countryside Act 1981 (as amended) & by the Conservation of Habitats & Species Regulations 2010

The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newts, reptiles, birds, water voles, badgers & bats). Natural England does not hold comprehensive information regarding the locations of species protected by law, but advises on the procedures & legislation relevant to such species. Records of protected species should be sought from appropriate local biological record centres, nature conservation organisations, groups & individuals; & consideration should be given to the wider context of the site for example in terms of habitat linkages & protected species populations in the wider area, to assist in the impact assessment.

The conservation of species protected by law is explained in Part IV & Annex A of Government Circular 06/2005 *Biodiversity & Geological Conservation: Statutory Obligations & their Impact within the Planning System*. The area likely to be affected by the proposal should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species & the survey results, impact assessments & appropriate accompanying mitigation strategies included as part of the ES.

In order to provide this information there may be a requirement for a survey at a particular time of year. Surveys should always be carried out in optimal survey time periods & to current guidance by suitably qualified & where necessary, licensed, consultants. Natural England has adopted standing advice for protected species which includes links to guidance on survey & mitigation.

2.5 Habitats & Species of Principal Importance

The ES should thoroughly assess the impact of the proposals on habitats &/or species listed as 'Habitats & Species of Principal Importance' within the England Biodiversity List, published under the requirements of S41 of the Natural Environment & Rural Communities (NERC) Act 2006. Section 40 of the NERC Act 2006 places a general duty on all public authorities, including local planning authorities, to conserve & enhance biodiversity. Further information on this duty is available here https://www.gov.uk/guidance/biodiversity-duty-public-authority-duty-to-have-regard-to-conserving-biodiversity .

Government Circular 06/2005 states that Biodiversity Action Plan (BAP) species & habitats, 'are capable of being a material consideration…in the making of planning decisions'. Natural England therefore advises that survey, impact assessment & mitigation proposals for Habitats & Species of Principal Importance should be included in the ES. Consideration should also be given to those species & habitats included in the relevant Local BAP.

Natural England advises that a habitat survey (equivalent to Phase 2) is carried out on the site, in order to identify any important habitats present. In addition, ornithological, botanical & invertebrate surveys should be carried out at appropriate times in the year, to establish whether any scarce or priority species are present. The ES should include details of:

- Any historical data for the site affected by the proposal (e.g. from previous surveys);
- Additional surveys carried out as part of this proposal;
- The habitats and species present;
- The status of these habitats & species (e.g. whether priority species or habitat);
- The direct & indirect effects of the development upon those habitats & species;
- Full details of any mitigation or compensation that might be required.

The development should seek if possible to avoid adverse impact on sensitive areas for wildlife within the site, & if possible provide opportunities for overall wildlife gain.

The record centre for the relevant local authorities should be able to provide the relevant information on the location & type of priority habitat for the area under consideration.

3. Soil & Agricultural Land Quality

Impacts from the development should be considered in light of the Government's policy for the protection of the best & most versatile (BMV) agricultural land as set out in paragraph 112 of the NPPF. We also recommend that soils should be considered under a more general heading of sustainable use of land & the ecosystem services they provide as a natural resource in line with paragraph 109 of the NPPF.

4. Cumulative & in-combination effects

A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure should be included within the assessment.

The ES should include an impact assessment to identify, describe & evaluate the effects that are likely to result from the project in combination with other projects & activities that are being, have been or will be carried out. The following types of projects should be included in such an assessment, (subject to available information):

a. existing completed projects;

b. approved but uncompleted projects;

c. ongoing activities;

d. plans or projects for which an application has been made & which are under consideration by the consenting authorities; &

e. plans & projects which are reasonably foreseeable, i.e. projects for which an application has not yet been submitted, but which are likely to progress before completion of the development & for which sufficient information is available to assess the likelihood of cumulative & in-combination effects."

A-2.4 Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust

A.5 The Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust provided the following advice in correspondence dated 18 August 2017.

"Thank you for consulting the Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust (BBOWT) on the EIA Scoping Opinion for the proposed River Thames Scheme. Channel Section 1 falls entirely within the Royal Borough of Windsor & Maidenhead & is therefore the section of the scheme that we are most focussed on & to which our comments here relate. Note that as a nature conservation organisation our comments relate solely to the protection & enhancement of biodiversity on & around the project site.

We have the following comments to make with regard to the proposed scope of the EIA;

1. The ecology desk study (within Appendix E: Preliminary Ecological Appraisals, para 3.4.34) has not picked up records of stag beetle within the Channel 1 study area. Stag beetle has been recorded in 2013 close to the north bank of Wraysbury 2(N) & adjacent to the proposed new channel. Impact mitigation & enhancement for stag beetle should thus be scoped in.

2. The ecology desk study (within Appendix E: Preliminary Ecological Appraisals, para 3.5.8) has not picked up records of galingale *Cyperus longus* within the Channel 1 study area. Galingale has been recorded in 2011 in the Horton & Kingsmead Lakes LWS. Galingale is nationally scarce & on the GB Red list as Near Threatened. Impact mitigation & enhancement for galingale should thus be scoped in.

3. The potential cumulative ecological impact of this proposal in conjunction with the planned Heathrow expansion & its associated ancillary development should be scoped in. It is not clear why the Heathrow expansion has been excluded from the Cumulative Effects Assessment. The assessment of potential cumulative ecological impacts with Heathrow expansion EIA should consider impacts on the features for which sites are designated (including but not limited to bird strike), other habitats & species of nature conservation interest, & should also pay specific attention to impacts on the Colne Brook & the Colne Valley Regional Park as a whole.

4. The Scoping Report at present only considers large scale habitat fragmentation in relation to great crested newts. The potential broader impacts of fragmentation of terrestrial habitats on dependent populations of terrestrial fauna as a result of the new river channel should be scoped in.

5. The EIA should include provision for monitoring the ecological development (e.g. species colonisation, succession) of all habitat created as part of the new river channel. This scheme presents an unrivalled opportunity to assess large scale aquatic & riparian habitat creation, which should be taken advantage of.

6. It should be made clear whether habitat enhancements planned to achieve the policy requirement for net gain in biodiversity will secure net gains within each planning authority jurisdiction for each section of the project, or over the scheme as a whole. The promotor may also wish to consider quantifying the net ecological impact & progress toward achieving an overall net gain in biodiversity using an impact assessment tool related to the Defra 2012 offsetting calculator. We acknowledge this would most likely require a bespoke tool to account for the unique nature of this project."

A-2.5 Greater London Authority

A.6 The Greater London Authority provided the following advice in correspondence dated 16 August 2017.

"[We] have reviewed the above document & also consulted with the Planning team at the GLA. The scope of the issues proposed for the ES seem reasonable & proportionate for this project. Much of the project is based outside London but we recognise & support strategic cross-boundary collaboration to reduce flood risk through these measures within the area. We also have a specific interest in the construction & operation of the proposed flood storage area in Ham - RB Richmond upon Thames & works at Teddington Lock, both of which fall within the GLA boundary."

A-2.6 Heathrow Airport Ltd

A.7 Heathrow Airport Ltd provided the following advice in correspondence dated 21 August 2017.

"The EIA has been reviewed against Heathrow Safeguarding criteria & I would like to bring the following to your attention;

The Draft Environmental Impact Assessment Scoping Report (June 2017) was provided along with the RTS Birdstrike Management Presentation (dated & presented 2nd August 2017).

The details provided confirm the safeguarding requirements & Heathrow Airport Limited as a statutory consultee, the delivery of 14.6km of flood relief channel split into 6.6, 4.8 & 3.7km sections respectively & a general principle of having channels developed between 20 & 50m wide & three to four metres deep. The channels will always be maintained with water & will be augmented with flow as necessary. All waterbodies are likely to support fish populations of varying sizes & assemblages & the general principle will be to improve the biodiversity & species assemblages present.

The existing baselines confirm a number of SPAs, Ramsar Sites, SSSIs, LNRs & SNCIs that are already present & attract large & / or flocking species of birds.

The critical areas to the airport in terms of hazardous birds & the risk of strikes are generally limited (but not exclusive to) the first 6.6km section & the habitat amendments proposed.

The amendments made & presented on August 2nd [2017] from the original proposals are substantial & have significantly reduced the risks posed by this area.

General Principles

The presentations provided confirmed the opportunity to reduce the open water sizes to <200m across (reduce the risk of a gull roost formation) has been taken. Similarly, several bunds have been implemented to enable access to & walkways through areas of existing islands that are known to support nesting hazardous waterfowl (e.g. Canada geese). These bunds will help break up both the open water areas & reduce the available habitat for nesting geese. These reductions are welcome & present a net benefit to risk control at the airport.

The water channels themselves mimic the existing River Thames in many ways & are therefore unlikely to bring birds into closer proximity to the airport. They have the potential to increase numbers of hazardous birds in the event that different habitat developments are generated but these have been limited in the key areas. The presence of fish would normally represent a specific risk from cormorants, herons & egrets but as the areas are already supporting fish assemblies this should not alter the existing baseline.

Areas of additional landscape would ideally be avoided such as berry, nut or fruit bearing bushes that provide food for foraging birds or large stands of canopy forming trees such as oak that provide nesting & roosting sites for other hazardous species. Again, as the areas already have existing woodland of this type present, then a request to ensure a 'parkscape' for oak trees as opposed to a forest of oak trees is detailed in any planting palettes would be recommended.

The weirs along the sections are likely to have a permanent flow of water over them hence there is little risk of birds using them to settle & nest etc. It should be considered; however, that if they do, licences may be needed for their removal hence designs options should be considered.

Section 1

The South Lea Farm section has several improvements that will reduce the risk from hazardous birds; these include secure fencing & hedge, an access track that is not open to the public, no islands & marginal vegetation. The removal of wetland areas from the plans is welcomed.

The Sunnymeads/Kingsmead section also shows benefits with bunds removing two of the islands. The HRA for Gadwall & Shovelor, however, provides a series of 'rockscape' island habitats. Ideally these would be developed so that they are permanently covered in water (shallow underwater habitat). The principles of grassland management on the vantage point mound would be preferred as a 'wildflower / rank grassland meadow' & not to be maintained as a short grass. Opportunities to divert public access away from the waterline & reduce the use of the area of picnicking (feeding the ducks) would be preferred. Screening of the bank sides with willow/brambles etc. would maintain the already unattractive landscape of this edge environment & reduce the likelihood of people provisioning wildfowl whilst maintain a secure habitat buffer for species of conservation concern.

The Wraysbury 2 / Hythe End section, subject to the above, the only comments would be that the Wraysbury 2 preferred option is also preferred from the benefits of goose management as this removes several currently used islands via access points. The Hythe End moorings & weirs may need design considerations regarding birds on the presence of nesting birds. Moorings are frequent along the existing length of the Thames & landowners are generally unenthusiastic about the presence of defecation from feral geese etc.

Section 2 & 3

The development of the landscape within sections 2 & 3 generally falls beyond existing hazardous bird boundaries created by current waterbodies & reservoirs in the area. The only site highlighting potential concern is the development of the Abbey Habitat Creation Site. Whilst this is located a significant distance from the airport (approximately 9km SSW) the aim is to generate a location with bird hides, shallow water scrapes reedbed & grazing marsh; ideal for attracting birds that are hazardous to aviation. Of the species likely to be attracted, however, the only concern is surrounding feral geese. We would recommend a management plan is put in place for this site, in perpetuity, to prevent any breeding geese (Canada, Greylag or Egyptian) from nesting on site & to enable removal of birds at other times of year if required.

Whilst outside the remit of this response, the construction period should also be considered at a later date in relation to monitoring for increases in hazardous birds (e.g. gulls foraging on open ground or uncovered waste disposal sites) that would need to be dispersed as part of a wider Bird Hazard Management Plan for the construction period.

It is important that any recommendations requested in this response are applied to any planning approval. Where a Planning Authority proposes to grant permission against the advice of Heathrow Airport Ltd, or not to attach conditions which Heathrow Airport Ltd has advised, it shall notify Heathrow Airport Ltd, & the Civil Aviation Authority as specified in the Town & Country Planning (Safeguarded Aerodromes, Technical Sites & Military Explosive Storage Areas) Direction 2002."

A-2.7 Highways England

A.8 Highways England provided the following advice in correspondence dated 18 August 2017.

"Highways England has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 & is the highway authority, traffic authority & street authority for the strategic road network (SRN). The SRN is a critical national asset & as such Highways England works to ensure that it operates & is managed in the public interest, both in respect of current activities & needs as well as in providing effective stewardship of its long-term operation & integrity.

In the case of this proposed site, Highways England is interested in the potential impact that the capacity improvements & flood channel project might have upon the M3, M4 & M25 or any maintenance activities related to them. We are interested as to whether there would be any adverse safety implications or material increase in queues & delays on the SRN from the construction of the site & also future operation. There is a combination of visitor facilities, habitat creation areas & Public Open Spaces within LEAs included in this proposal. Highways England would be concerned with the potential additional trips these sites could create on the SRN.

Highways England note that there is a Transport Assessment proposed by the developer, for which up-to-date traffic data for the key routes likely to be affected by construction & operation traffic will be collected & used in modelling to examine the impact of the project. It is stated within the scope that the anticipated number of vehicle movements required during construction, the number of operatives active on site at any one time during construction, indication of all temporary or permanent diversions or closures of roads & rail required & the anticipated number of visitors that might utilise the new LEAs & area of habitat creation once the project is operational will be provided. Highways England supports this proposed methodology.

It is noted that regular meetings have been held with Highways England to provide progress updates & reviews of the proposed channel design in relation to Highways England's assets, & any working arrangements required. These discussions should continue as this project evolves, so that we are aware of the full intentions of the planned works. I understand that the Highways England Environment Group have been involved in discussions with you & it is important that their views continue to be sought on the proposals."

A-2.8 Surrey County Council: Archaeology

A.9 Surrey County Council's archaeological service provided the following advice in correspondence dated 18 August 2017.

"This proposed linear scheme runs through a landscape which past discoveries suggest has a high potential to contain significant archaeological remains from the prehistoric & later periods.

The applicants have acknowledged the potential impact that the scheme may have on the historic environment & the consequent requirement for a comprehensive suite of archaeological works in order to fully inform the decision making process. An initial desk based assessment has been produced that has highlighted areas of archaeological significance & enabled a phased programme of appropriate site investigation works to be designed. These works, which involve geophysical survey & borehole investigation will enable a programme of targeted trial trenching to be put in place that which will lead to the development of detailed mitigation proposals once the impact of the scheme on the archaeological resource has been identified.

All of the above works have been designed in consultation with the Heritage Conservation Team & other stakeholders & these discussions are reflected in the approach outlined in the EIA scoping report which I can confirm provides an appropriate methodology to characterise the nature & significance of the heritage resource within the area of the proposed scheme & so enable appropriate mitigation measures to be designed to mitigate any threats to this resource that may be posed by the proposals."

A-2.9 Surrey County Council: Ecology

A.10 Surrey County Council's ecologist provided the following advice in correspondence dated 14 August 2017.

"Overall, this seems very comprehensive & I like the approach of splitting the scheme into the three component parts. However, when reading it electronically, it is difficult to be sure which area is being looked at & I would like to suggest the scheme element e.g. Channel 3 is incorporated into the information on each page.

Mike Waite has also commented on the lack of references to Biodiversity Opportunity Areas & the information in the Policy Statements can help inform the mitigation & compensation measures & I would fully endorse that approach.

The documents refer to Sites of Nature Conservation *Interest* whereas in Surrey these are called Sites of Nature Conservation *Importance*. There is a partial explanation in the footnote on page 12 & also in Appendix C which is slightly different. I suggest that the nomenclature is made more consistent & the different terms explained for the different local authority areas, e.g. Wildlife Heritage Sites in Windsor & Maidenhead, & Sites of Nature Conservation Importance in Spelthorne, Runnymede & Elmbridge, & Other Sites of Nature Importance in London Borough of Richmond. The correct terminology will be important when linking the designated sites to the different local authority polices.

Regarding the further surveys, table 8-3, page 61 is helpful in setting these out. However, I note that terrestrial invertebrates have been given very scant coverage in contrast to aquatic invertebrates & I do not think the assessment for channels 2 & 3 as likely to be of borough value, Paragraph 5.4.34 is based upon adequate survey. As invertebrates form the major component of biodiversity, they need to be surveyed which inform both the Ecological Impact Assessment but also the mitigation & compensation measures & it will additionally provide a baseline for the monitoring of their success or otherwise.

With a major scheme taking several years to progress to planning permission, it would be helpful for a table of surveys of habitats & species, when they were carried out, the areal extent covered & their likely validity in years. Full resurveys may not be required & a checking survey to check for any changes that may affect the habitat or species assessments may be sufficient in some case. This will ensure compliance with NPPF para. 165 which requires planning policies & decisions to be based on up-to-date information about the natural environment."

A-2.10 Surrey County Council: Highway Authority

A.11 The Highway Authority for Surrey (Surrey County Council) provided the following advice in correspondence dated 22 August 2017.

"The EIA should give consideration to the potential impact of this development on the surrounding transport network & land uses with particular regard to HGV movements & should include the following:

- A preliminary design of the site accesses & vehicle turning/parking areas within the site compounds to ensure that the space within them can accommodate all associated vehicles &, that these vehicles will enter & exit the site compounds in a forward gear.
- Details of the proposed mitigation methods to prevent, reduce or offset any adverse impact to the highway/transport infrastructure.
- An assessment of the effectiveness of any proposed mitigation measures.
- A full Transport Assessment Report encompassing details of methodologies used to carry out the associated traffic appraisal & demonstrating that a significant proportion of materials / waste / spoils would be transported by barges on the River Thames. Daily profile of vehicle movements confirming that vehicle movements are not unnecessarily concentrated on peak traffic hours (08.00-09.00hrs & 17.00-18.00hrs). The proposed traffic surveys should also cover the sections of 'B' roads that are likely to be affected.
- A Travel Plan document incorporating actions that are aimed at minimising the number of site operators' vehicles accessing/exiting this site.
- A traffic management plan including the necessary traffic regulation orders relating to the diversion of vehicular traffic.
- A full construction traffic management plan (CTMP) with special consideration given to the sensitivity of this location (e.g. pedestrian activities relating to visitors & recreational use of the River Thames), consolidation/timing of deliveries, sheeting of lorries & incorporating a routing plan showing that construction vehicles would avoid residential streets as far as it is practicable. Additionally, the CTMP should ensure that noisy equipment is sited away from residential boundaries that are close to construction working areas."

A-2.11 Surrey County Council: Historic Buildings

A.12 Surrey County Council's historic building officer Ecologist provided the following advice in correspondence dated 3 August 2017.

> "The listed buildings & other built heritage assets have been drawn off the relevant HERs. I do not know of any other heritage assets that should be taken into account, so the data set appears to be complete.
>
> I could not find details of the physical nature of the works to know how the setting of any listed building might be affected. Perhaps I missed details in the mountain of e-paperwork. On the assumption ground levels will only be lowered to create more capacity I do not consider any special areas of study are needed. The more natural looking the resulting topography the better. If bunds or grounds raising is involved the impact of this/these on the setting of nearby listed buildings & conservation areas will need study. It looks as if the EIA is heading in the right direction as far as built heritage is concerned."

A-2.12 Surrey County Council: Landscape

A.13 Surrey County Council's landscape architect provided the following advice in correspondence dated 28 July 2017.

> "In view of the likelihood of significant effects of the development on the landscape, a Landscape & Visual Impact Assessment (LVIA) must be undertaken. The LVIA should identify those significant effects, leading on to any modifications in design & a comprehensive mitigation plan & monitoring measures. The proposals should be assessed in the context of the guidelines for *Landscape & Visual Impact Assessment* (Third Edition) as produced by the Landscape Institute & the Institute of Environmental Management & Assessment.
>
> **Landscape & Visual Character**
>
> There should be an assessment of the likely significant effects of the development on both landscape & visual amenity. The assessment will need to consider the connectivity of the Thames Valley landscape & how the proposed development might affect that connectivity, which will not be limited to the finite boundaries or immediate surroundings of the development itself. This means looking at the scheme holistically, & not just as piecemeal or separate schemes.
>
> **Assessment of landscape effects;** the assessment of the effects on landscape as a resource, should start from a landscape character assessment. A local landscape character study will be required to identify key characteristics of the site over the full extent of the river corridor/floodplain affected by the development.
>
> The starting point will be national & county character assessments. The site is located in the National Character Area '115: Thames Valley' & Surrey County Character Area 'RF3: Thames River Floodplain' from the County Council Landscape Character Assessment 2015. A small area of ancillary works is to be carried out in the channel adjacent to Surrey County Character Area 'UW4: Hurst Park Significant Greenspace'. Information on the Surrey assessment can be found on the Surrey CC website.
>
> However, these studies are at a regional scale. A more localised character study should be carried out at an appropriate local scale, in accordance with the methodology as recommended by Natural England in their 2012 & 2015 guidance on character assessment.

As the scope of the scheme extends beyond Surrey, the Surrey landscape assessment will need to be stitched together with any available studies beyond the County boundary. This should then inform a more detailed localised landscape character assessment over the whole geographical area.

Assessment of visual effects; effects on views & visual amenity, should identify sensitive visual receptors that are likely to be affected by the proposals. The selection & assessment of key viewpoints should include a representative selection from the Public Rights of Way network. Worst case scenario/winter views should also be considered. Again as development is proposed with a landscape that is a riverine corridor, the visual effects could be interconnected & should be considered through the whole catchment/corridor.

Viewpoints

A series of representative viewpoints should be agreed with Surrey County Council.

Photomontage & other technical requirements

Where significant adverse landscape or visual effects are identified, & are to be modified by the retention of existing landscape features or the design of new landscape features, photomontage &/or sections should be provided to demonstrate their efficacy.

Cumulative Impacts

In view of the scale of the development the applicant will need to look at cumulative impacts & resulting effects over the whole series of different range of schemes proposed, to satisfy both guidance & cross boundary concerns from a District or County perspective.

Cumulative landscape & visual effects must be assessed in LVIA when it is carried out as part of an EIA. Cumulative impacts would include actions that occurred in the past, present or are likely to occur in the foreseeable future: for example any enabling development perceived necessary to fund this scheme. The proposed development cannot simply be broken up in to separate applications for each Planning Authorities area, without looking at the whole, as this is likely to result in artificially minimizing the overall effect of the scheme on the landscape.

Mitigation

Where significant adverse effects are identified, the Environmental Statement should identify a comprehensive package of mitigation, highlighting any cross cutting issues of landscape with ecology & with any other mitigation required such as noise & visual attenuation, soil movement, lighting, access, drainage & phasing. Alternative ways of working & different types of cumulative effects should be considered, & at different stages of the project's life cycle.

Consideration should be given to the inter-relationship between landscape & ecology mitigation, & a combined landscape & ecology mitigation plan prepared. This should include the proposals & links with surrounding green infrastructure.

In response to looking at the effects on the scheme on a landscape scale, similarly there would need to be a hierarchy of mitigation which looks at the scheme as a whole, & then work down the scale looking at each different part, or parts of the scheme. Mitigation should then be described at the appropriate scale for the whole scheme, & then from each part of the scheme how mitigation will deliver opportunities for enhancement for each neighbourhood or discrete locality. No matter how small the scheme of mitigation, it should be shown in the context of how it delivers, connects or contributes to the whole.

All of the above process is fully described within the latest landscape guidance for LVIA, '*Guidelines for Landscape & Visual Impact Assessment*' (Third Edition), & on the GOV.UK website. The applicant should seek further clarification over aspects of the process within this guidance."

A-2.13 Sport England

A.14 Sport England provided the following advice in correspondence dated 10 JUly 2017.

> "Sport England considers that the impact of a development on sports facilities or activities would not normally fall within the scope of an Environmental Statement. Consequently we do not wish to comment on the Screening or Scoping Opinion consultation.
>
> Any subsequent planning application should however consider the implications for sport in the context of NPPF Para's 73 & 74, local plan policy & any strategic evidence set out in local playing pitch &/or built facilities strategies within the normal supporting documentation for a planning application.
>
> Sport England should be consulted on the planning application if it meets the statutory requirements contained within SI 2015/295 (development affecting playing fields) or the guidance for non-statutory consultation with Sport England contained within Planning Practice Guidance: Open Space, Sports & Recreation Facilities (Paragraph: 003).
>
> General guidance on assessing the need to protect, enhance & provide sports facilities can be found by following the link below:
>
> http://www.sportengland.org/facilities-planning/planning-for-sport/development-management/planning-applications/ "

A-2.14 Surrey Gardens Trust

A.15 The Surrey Gardens Trust provided the following advice in correspondence dated 14 July 2017.

> "The Gardens Trust has been notified of the EIA Scoping application(s) & on behalf of Surrey Gardens Trust I received their weekly consultations list sent to County GTs.
>
> From a fairly rapid look at the online documents I think that the Parks & Gardens interests have been identified & that there are no significant implications for the sites of interest both designated & non-designated.
>
> One small point arises from the Scoping Report, Section 9.2.5.1 where the Registered site of Oatlands Park seems to be confused with Oatlands Palace which is nearby & Scheduled. The latter is then not reflected in the summary box."

A-2.15 Surrey Wildlife Trust

A.16 The Surrey Wildlife provided the following advice in correspondence dated 11 August 2017.

> "Thank you for this opportunity to comment on the proposed scope of the intended EIA for the River Thames (flood alleviation) Scheme (RTS), as presented in the Environment Agency's document *Draft Environmental Impact Assessment Scoping Report for Consultation* (June 2017). Please consider these comments as both those of the Surrey Wildlife Trust, & provided on behalf of the Surrey Nature Partnership. As a representative of both organisations I have personally been involved in several opportunities to contribute to the shaping of the scheme over the past eighteen months.

Our comments are brief, as the document appears thorough in its research and is therefore essentially comprehensive.

Paragraph 4.1.6.4. We welcome the clearly stated intention here for the RTS Vision to meet the referenced policy obligations, while "*..seeking to achieve the goal of net gain in biodiversity & to create additional habitat at a Project wide level*." A further reference might include the Surrey Nature Partnership's adopted objectives & targets for the relevant Biodiversity Opportunity Areas (as the basis for achieving a coherent & resilient ecological network within & beyond Surrey).

8.2.2. It is important not to lose sight of the fact that the Thames floodplain has historically been extensively drained here. By extension habitat creation & restoration projects should aspire to incorporate plenty of wet/seasonally-flooded grassland (equating to Floodplain grazing marsh); & on higher, drier retention bunds that might be purposely capped with the naturally-distributed Thames terrace-derived sand/gravelly soils, Lowland dry acid grassland communities ought to be considered as part of the habitat creation goal.

8.2.3.2. It is becoming increasingly apparent that this section of the Thames corridor is certainly regionally & possibly nationally important for the presence of Nathusius' pipistrelle *Pipistrellus nathusii*, both commuting through & potentially resident here.

8.2.3.13. Merlin (listed as within the WCA Schedule 1 suite) is an exclusively wintering species in South-East England, & as far as we know has never (i.e. historically) bred within Surrey.

8.2.3.22. It should be noted that at the present time, there are no known extant populations of Water voles in the administrative county of Surrey. Any discoveries in this regard would be highly significant

8.2.3.24. The Channel 2 study area is highly likely to support further "*notable terrestrial invertebrates*". But note the Wall butterfly is now extinct in Surrey.

The ecological surveys and data reviews for the RTS would appear to be making significant records that are essentially new or may have previously been inaccessible.

I hope these comments are useful and we look forward to further opportunities for consultation on the emerging EIA for the River Thames Scheme."

A-2.16 Transport for London

A.17 Transport for London provided the following advice in correspondence dated 17 August 2017.

"Thank you for consulting Transport for London (TfL) on the draft EIA scoping report for the above project. As the strategic transport authority for London, TfL manages the Transport for London Road Network (TLRN) including the A3, A312 within London which may be used as strategic access routes for HGVs travelling to the sites in Richmond & Kingston. TfL has an interest in the protection of rail infrastructure in particular those routes used by London Underground services & the future Elizabeth line (Crossrail). As noted in the scoping report TfL also manages a number of bus services in the study areas.

TfL will therefore be interested in measures designed to minimise impacts on rail infrastructure, the highway network & transport operations & to mitigate any negative impacts, both during construction & in operation. In particular, London Underground Infrastructure Protection would want to see further details of areas that may be affected by flooding during construction works in order to update contingency plans. An evaluation of the long term capacity improvements would enable flood risk assessments for the London Underground network to be updated.

Documents submitted for consideration by TfL should take account of the London Plan, Mayor's Transport Strategy, available travel data & TfL guidance documents including advice on Transport Assessments, Travel Plans & Construction Logistics that are published on the TfL website.

We look forward to engaging with the applicants as they develop the full EIA & supporting documents."

A-2.17 Runnymede Borough Council – Environmental Health Officer

A.18 Runnymede Borough Council's environmental health officer provided the following advice in correspondence dated 4 July 2017.

"Comments: No formal comment since the document advises at 2.1.1.4 that a statutory EIA will be undertaken & a Environmental Statement submitted since they are of the view that the works are such that fall under the definition contained within the regulations.

1. Noise & vibration

I read that they will be undertaking areas of sheet piling when they are going through areas of land with landfill activities. Hence there may well be times when there will be a large amount of sheet piling undertaken. Some of the areas of historic landfill sites are close to areas of residential housing & hence it would be useful in terms of scoping environmental issues if they could look to provide full details of the methodology of piling operations which will be adopted when they are operating close to residential properties.

2. Air Quality

I note that they have reproduced information taken from our diffusion tubes in relation to nitrogen dioxide. I also see that the scoping document makes it clear that they are aware of the presence of our Air Quality management areas & hence it will be interesting to …

3. Contaminated Land

I have asked our contaminated land officer if she has any specific comments in relation to the scoping of the environmental statement in relation to the issues of contamination. However, it is interesting to note that it is the EAs application & they are the body entrusted to comment on contamination effecting water. It is the creation of a channel through landfill sites that may introduce contamination to the water in the channel & one would like to think that the EA will be able to produce a scheme that is capable of preventing water contamination from sources such as landfill sites. I am also aware that the EA have sampled various locations where there are landfills & hence once they release this environmental information as to what has been found within the landfill sites then this will further our knowledge of landfill issues within the borough."

A-2.18 Runnymede Borough Council – Contaminated Land Officer

A.19 Runnymede Borough Council's contaminated land officer provided the following advice in correspondence dated 5 July 2017.

"The course & location of the relief channel workings including the proposed landscape enhancement areas have been cross referenced with areas of potential contamination which have been identified by RBC.

The location of the workings has contact with the following potentially contaminated land areas:

- GE043 Norlands Lane
- 1751 Royal Egham Hythe former landfill (Current open land use)
- 041 Former Quarry & landfill (Current open land use, controlled landfill gas venting)
- 1727 Chertsey Lane Former landfill (Current open land use / parking)
- 033 Former Pit, Thorpe Park (Current recreational water
- 014 Infilled Quarry, Thorpe Park (Current recreational water / car park)
- 1948 Chertsey Lane Landfill (Current Car park)
- Thorpe lakes Former tanks 1986

The location of the workings is located within 250m of the following potentially contaminated land areas:

- 004 Former Quarry & infilling Ten Acre Lane / Green Lane (Current commercial use)
- 163 Factory or Works
- 121 Ferry Lane Sewage Works

As well as those already identified:

- Elmcott & Coldharbour
- Coldharbour Lane Landfill
- Twynersh Farm
- Mixnams Lane Site No.1
- Mixnams Lane Site No. 2
- Penton Hook

These areas have been addressed within the report & the assessment methodology has identified the potential effect on soil quality form mobilising contaminants during operation as being potentially significant.

I have concerns that where there are no records of the type of waste received via EA records, no GI has been taken. This leaves any unauthorised tipping material un-investigated.

No GI reports have been submitted to RBC so I am unable to comment on their placement suitability or their relevance.

No consultation on additional potentially contaminative sites within the borough was sought. There may be additional information we hold regarding historic landfills & investigation which have been undertaken which may help contaminated land considerations for this project."

Appendix B

The Requirements of Regulation 18(3) and Schedule 4 of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017

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Appendix B: The Requirements of Regulation 18(3) & Schedule 4 of the Town & Country Planning (EIA) Regulations 2017

B.1 Regulation 18(3) of the EIA Regulations 2017 specifies the minimum information that should be provided in an Environmental Statement.

(3) An environmental statement is statement which includes at least -

(a) a description of the proposed development comprising information on the site, design, size & other relevant features of the development;

(b) a description of the likely significant effects of the proposed development on the environment;

(c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce &, if possible, offset likely significant adverse effects on the environment;

(d) a description of the reasonable alternatives studied by the developer, which are relevant to the proposed development & its specific characteristics, & an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;

(e) a non-technical summary of the information referred to in sub-paragraphs (a) to (d); &

(f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development & to the environmental features likely to be significantly affected.

B.2 Schedule 4 of the EIA Regulations 2017 specifies the range of information that should ideally be included in an Environmental Statement.

1. Description of the development, including in particular:

(a) a description of the location of the development;

(b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, & the land-use requirements during the construction & operational phases;

(c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand & energy used, nature & quantity of the materials & natural resources (including water, land, soil & biodiversity) used;

(d) an estimate, by type & quantity, of expected residues & emissions (such as water, air, soil & subsoil pollution, noise, vibration, light, heat, radiation & quantities and types of waste produced during the construction and operation phases).

2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size & scale) studied by the developer, which are relevant to the proposed project & its specific characteristics, & an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

3. A description of the relevant aspects of the current state of the environment (baseline scenario) & an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information & scientific knowledge.

4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna & flora), land (e.g. land take), soil (e.g. organic matter, erosion, compaction, sealing), water (e.g. hydromorphological changes, quantity & quality), air, climate (e.g. greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural & archaeological aspects, & landscape.

5. A description of the likely significant effects of the development on the environment resulting from, inter alia:

(a) the construction & existence of the development, including, where relevant, demolition works;

(b) the use of natural resources, in particular land, soil, water & biodiversity, considering as far as possible the sustainable availability of these resources;

(c) the emission of pollutants, noise, vibration, light, heat & radiation, the creation of nuisances, & the disposal & recovery of waste;

(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);

(e) the cumulation of effects with other existing &/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;

(f) the impact of the project on climate (for example the nature & magnitude of greenhouse gas emissions) & the vulnerability of the project to climate change;

(g) the technologies & the substances used.

The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects & any indirect, secondary, cumulative, transboundary, short-term, medium-term & long-term, permanent & temporary, positive & negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC & Directive 2009/147/EC.

6. A description of the forecasting methods or evidence, used to identify & assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information & the main uncertainties involved.

7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment &, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, & should cover both the construction & operational phases.

8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents &/or disasters which are relevant to the project concerned. Relevant information available & obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU of the European Parliament & of the Council or Council Directive 2009/71/Euratom or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment & details of the preparedness for & proposed response to such emergencies.

9. A non-technical summary of the information provided under paragraphs 1 to 8.

10. A reference list detailing the sources used for the descriptions & assessments included in the environmental statement.

Appendix C

Description of the proposed development

Compiled by Surrey County Council on the basis of the information provided in the *Draft Environmental Impact Assessment Scoping Report for Consultation* (June 2017, GBV JV Ltd for the Environment Agency)

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Appendix C: Description of the proposed development

C.1 Purpose

C.1 The aim of this description is to provide a comprehensive breakdown of the different elements of the proposed River Thames Scheme, for which the Environment Agency is intending to seek planning permission in 2018, by means of the submission of a number of parallel applications to the planning authorities in whose administrative areas the different scheme elements would be located. Such a breakdown of the proposed scheme is required to enable the planning authorities to advise the applicant on the number, form and content of the applications that will need to be submitted.

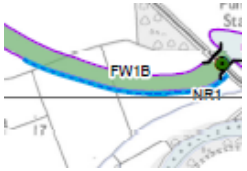
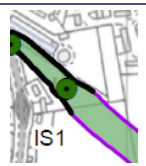
C.2 Sources of Information & Assumptions

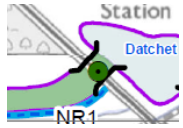
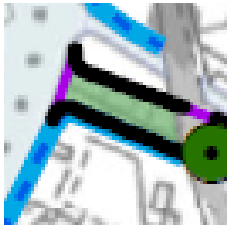
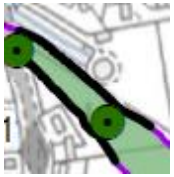
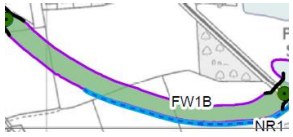
C.2 The description of the development is primarily based on the information that is set out in the Draft Environmental Impact Assessment Scoping Report and its supporting appendices, which has been prepared by GBV JV Ltd for the Environment Agency, and was published in June 2017.

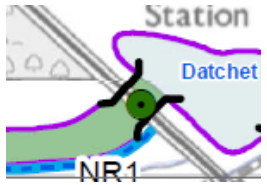
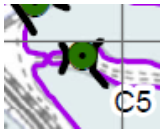
C.3 In order to estimate the amounts of materials that may be required to construct the flood embankments, separation embankments and bunds that are referred to as part of the scheme reference was made to the Environment Agency's '*Fluvial Design Guide*' (2010). Chapter 9 of that publication provided information about the dimensions of flood embankments that was used to calculate ranges for the amounts of materials that might be required. The assumptions made when calculating materials requirements for embankments and bunds are set out in the table below.

Scheme Component	Height	Base Width	Crest Width	Area (m^2)	Volume (m^3)
Separation embankment (sheet piled)	8m	5m	5m	Height x width	Area x length
Separation embankment (sloped sides)	8m	70m	5m	0.5 x height x(base width + crest width)	Area x length
Flood embankment (small)	0.3m	3m	2m	0.5 x height x(base width + crest width)	Area x length
Flood embankment (large)	2.0m	12m	5m	0.5 x height x(base width + crest width)	Area x length

Summary of Key Scheme Components by Relevant Planning Authority Area					
Scheme Component	**Royal Borough of Windsor & Maidenhead**	**Runnymede Borough Council**	**Spelthorne Borough Council**	**Elmbridge Borough Council**	**London Borough of Richmond upon Thames**
Channel section through natural ground	2.01km total length Material arising of 292,350m^3	1.11km total length Material arising of 195,750m^3	0.14km total length Material arising of 18,900m^3	N/a	N/a
Channel section through closed landfill	2.31km total length Waste arising of 113,600m^3	1.22km total length Waste arising of 97,600m^3	1.42km total length Waste arising of 128,800m^3	N/a	N/a
Separation/Protection embankments & bunds	1.77km total length Material requirements of between 70,920m^3 & 531,900m^3	N/a	N/a	N/a	N/a
Flood embankments	6 embankments 3.06km total length Materials requirements of between 2,295m^3 & 52,020m^3	5 embankments 1.35 km total length Materials requirements of between 1,012.5m^3 & 22,950m^3	3 embankments 1.44 km in length Materials requirement of between 1,080m^3 & 24,480m^3	N/a	N/a
Major structures	13 major structures to provide road, rail or path crossings 5 major water control structures	7 major structures to provide road, rail or path crossings 9 major water control structures	10 major structures to provide road, rail or path crossings 3 major water control structures	N/a	N/a
Major weir works & channel widening	N/a	N/a	N/a	Widening of Desborough Cut 1 new weir complex Estimated total CD&E waste arising of 14,100m^3	1 new weir complex 1 weir upgraded Estimated total CD&E waste arising of 2,000m^3
Flood storage areas	N/a	N/a	N/a	N/a	Creation of 4.5 ha flood storage area Estimated total CD&E waste arising of 90,000m^3
Processing plants & compounds	3 potential temporary materials processing sites 1 permanent compound 5 temporary compounds	2 potential temporary materials processing sites 2 permanent compounds 2 temporary compounds	2 potential temporary materials processing sites 1 permanent compound 3 temporary compounds	1 temporary compound	2 temporary compounds
Enhancement areas & visitor facilities / infrastructure	3 'Landscape Enhancement Areas' 3 'Habitat Creation Areas' 2 visitor centres & 2 car parks 8.14km of new paths	2 'Landscape Enhancement Areas' 4 'Habitat Creation Areas' 1 visitor centre & 1 car parks (2 possible locations) 5.13 km of new paths	1 'Landscape Enhancement Area' 2 'Habitat Creation Areas' 1 visitor centre & 1 car park 5.65km of new paths	1 'Habitat Creation Area'	1 'Habitat Creation Area'

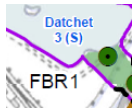
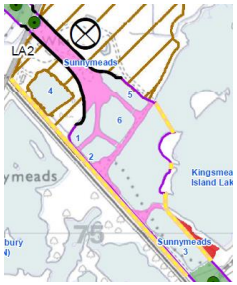
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
FW1A – Flood Embankment	498750 176440 (NE) 498698 176472 (NW) 498479 176053 (SW) 498719 176004 (SE)	Flood embankment of approximately 0.3m to 2m in height & approximately **800m** in length. Commencing on the southern side of the proposed inlet for Channel Section 1 & extending south along the eastern bank of the River Thames for a distance of approximately 500 metres, then turning east & extending across open land for approximately 300 metres, terminating at the B3021 (Southlea Road). **[Materials required for embankment: between 600 cubic metres & 13,600 cubic metres]**	
FW1B – Flood Embankment	499106 176098 (W) 499706 176053 (E)	Flood embankment of approximately 0.3m to 2m in height & approximately **600m** in length. Situated on the southern side of the proposed Channel Section 1, extending across open & agricultural land, terminating in the east at the proposed culvert (NR1) under the Windsor to London main rail line. **[Materials required for embankment: between 450 cubic metres & 10,200 cubic metres]**	
FW1C – Flood Embankment	498749 176457 (SE) 498688 176531 (NW)	Flood embankment of approximately 0.3m to 2m in height & approximately **100m** in length. Situated on the northern side of an existing inlet situated to the north of the proposed inlet for Channel Section 1 & extending north along the eastern bank of the River Thames for a distance of approximately 60 metres. **[Materials required for embankment: between 75 cubic metres & 1,700 cubic metres]**	
LA1 – Major Structure – Culvert /Bridge for B3021 (Southlea Road)	498775 176408	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 1 to pass under the B3021 (Southlea Road).	
IS1 – Major Structure – water level or flow control	498878 176314	Construction of an intake/inflow structure, a gated weir, to control water levels or flows, within the proposed alignment of Channel Section 1, situated to the east of the B3021 (Southlea Road).	

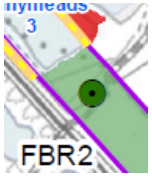
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
NR1 – Major Structure – Culvert under rail line	499692 176078	Construction of a major structure, either a culvert or bridge, to enable Channel Section 1 to pass under the main Windsor to London rail line, on the section of line that extends between Datchet station to the north west & Sunnymeads station to the south east.	
Channel Section 1(A-1) – Engineered channel through natural ground	498682 176438 (W) 498762 176409 (E)	Construction of an engineered channel through natural ground, measuring approximately **100m** in length & approximately 45m in width & 3m in depth, with a 5m wide maintenance track situated on one side of the cut. The channel will commence on the eastern bank of the River Thames, to the north of the property known as 'Poplars', which is located on the western side of the B3021 (Southlea Road), & will terminate at the B3021 (Southlea Road), where channel passes under the road by means of a culvert or bridge (NR1). **[Materials arising: 13,500 cubic metres of soils, sands, gravels & clays]**	
Channel Section 1(A-2) – Engineered channel through natural ground	498796 176385 (W) 498918 176289 (E)	Construction of an engineered channel through natural ground, measuring approximately **160m** in length & approximately 45m in width & 3m in depth, with a 5m wide maintenance track situated on one side of the cut. The channel will commence in the west at the B3021 (Southlea Road), where the channel passes under the road by means of a culvert or bridge (NR1), & will terminate in the east in an area of agricultural land located to the east of no.49 Southlea Road (B3021). **[Materials arising: 21,600 cubic metres of soils, sands, gravels & clays]**	
Channel Section 1(A-3) – Channel through natural ground	498918 176289 (W) 499672 176065 (E)	Construction of a channel through natural ground, measuring approximately **860m** in length & approximately 45m in width & 3m in depth, with a 5m wide maintenance track situated on one side of the cut. The channel will commence in an area of agricultural land located to the east of no.49 Southlea Road (B3021), & will terminate in an area of agricultural land located to the west of the section of the main Windsor to London rail line that extends between Datchet station to the north west & Sunnymeads station to the south east. **[Materials arising: 116,100 cubic metres of soils, sands, gravels & clays]**	

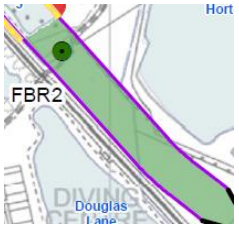
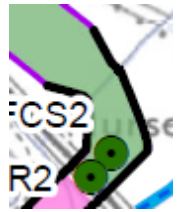
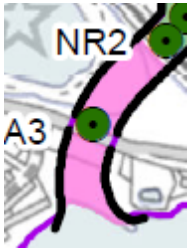
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
Channel Section 1(A-4) - Engineered channel through natural ground	499672 176065 (W) 499684 176129 (E)	Construction of an engineered channel through natural ground, measuring approximately **50m** in length & approximately 45m in width & 3m in depth, and accommodating a culvert / bridge for the Windsor to London main rail line. The channel will commence in an area of agricultural land located to the west of the section of the main Windsor to London rail line that extends between Datchet station to the north west & Sunnymeads station to the south east, & terminate in the waterbody denoted as 'Datchet 2' in the Draft EIA Scoping Report (June 2017) for the RTS. **[Materials arising: 6,750 cubic metres of soils, sands, gravels & clays]**	
C1 – Major Structure	499878 176057	Construction of a major structure, a vehicular / all purpose bridge crossing, to enable the channel to pass beneath an existing public footpath, & to link the waterbody denoted 'Datchet 2' to the waterbody denoted 'Datchet 3(N)' in the Draft EIA Scoping Report (June 2017) for the RTS.	
C5 – Major Structure	499911 175978	Construction of a major structure, possibly a culvert, to enable the channel to pass beneath an existing access track, & to link the waterbody denoted 'Datchet 3(N)' to the waterbody denoted 'Datchet 3(S)' in the Draft EIA Scoping Report (June 2017) for the RTS.	
Channel 1(B-1) – Engineered channel through natural ground	499868 176073 (NW) 499896 176047 (SE)	Construction of a channel through natural ground, measuring approximately **40m** in length & approximately 45m in width & 3m in depth, & accommodating a major structure, possibly a culvert, to pass beneath an existing public footpath, & to link the waterbody denoted 'Datchet 2' to the waterbody denoted 'Datchet 3(N)' in the Draft EIA Scoping Report (June 2017) for the RTS. **[Materials arising: 5,400 cubic metres of soils, sands, gravels & clays]**	
Channel 1(B-2) – Engineered channel through natural ground	499911 175985 (N) 499916 175969 (S)	Construction of a channel through natural ground, measuring approximately **20m** in length & approximately 45m in width & 3m in depth, & accommodating a major structure, possibly a culvert, to pass beneath an existing public footpath, & to link the waterbody denoted 'Datchet 2' to the waterbody denoted 'Datchet 3(N)' in the Draft EIA Scoping Report (June 2017) for the RTS. **[Materials arising: 2,700 cubic metres of soils, sands, gravels & clays]**	

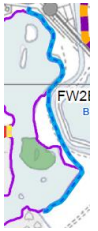
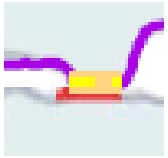
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)

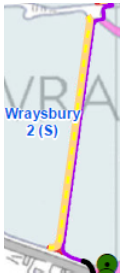
Channel Section 1: Datchet to Hythe End

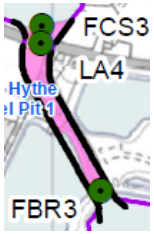
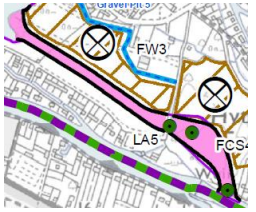
Scheme Component	NGRs	Description	
FBR1 – Major Structure	500272 175750	Construction of a major structure, either a culvert or a bridge, to enable the channel to pass beneath an existing public footpath that is situated at the south eastern end of the waterbody denoted 'Datchet 3(N)' in the Draft EIA Scoping Report (June 2017) for the RTS.	
LA2 – Major Structure - Bridge for B376 (Welley Road)	500337 175722	Construction of a major structure, a vehicular / all purpose bridge crossing, to enable the channel to pass beneath the B376 (Welley Road).	
Channel Section 1(C-1) – Channel through natural ground	500262 175754 (NW) 500345 175718 (SE)	Construction of a channel through natural ground, measuring approximately **90m** in length & approximately 45m in width & 3m in depth, & accommodating two major structures (FBR1 & LA2). The channel would commence at the south eastern end of the waterbody denoted 'Datchet 3(N)' in the Draft EIA Scoping Report (June 2017) for the RTS, & would terminate on the eastern side of the B376 (Welley Road). **[Materials arising: 12,150 cubic metres of soils, sands, gravels & clays]**	
Channel Section 1(C-2) – Engineered channel through landfill/made ground, 4 no. separation/protection embankments & 1 no. bund	500345 175718 (NW) 500876 174898 (SE)	Construction of a channel through landfill / made ground, measuring approximately **970m** in length & approximately 20m in width & 4m in depth for approximately 350m of that length. For the remaining 620m of its length the channel section would be composed of a body of open water created by: removing the areas of land (15,000 square metres or 1.5 hectares) that currently separate the waterbodies denoted 'Sunnymeads 1', 'Sunnymeads 2', 'Sunnymeads 3', 'Sunnymeads 5' & 'Sunnymeads 6', & part of the waterbody denoted 'Kingsmead Island Lake'; by the construction of 3 no. separation/protection embankments (of either sheet piled construction or sloped side construction, & measuring 110m, 15m & 270m in length) to form the northern boundary of the channel between the western bank of 'Kingsmead Island Lake', the 2 islands located in the south of that waterbody & the spit of land that forms the boundary between 'Kingsmead Island Lake' & 'Sunnymeads 3'; & by the construction of a separation / protection embankment(of either sheet piled construction or sloped side construction, & measuring 850m) to form the southern boundary of the channel parallel to the Windsor to London main rail line. The construction of the channel would also require the demolition of at least 1 no. building. To include installation of a slipway within the channel, & fishing facilities on the western bank of 'Sunnymeads 1'. **[87,500 cubic metres of waste removed from existing landfills]** **[Materials required by sheet piled separation embankments: 49,400 cubic metres]** **[Materials required by sloped side embankments: 373,500 cubic metres]**	

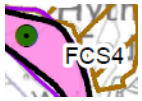
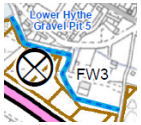
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
Potential Temporary Material Processing Site (Sunnymeads)	500500 175656	Construction & operation of a temporary materials processing facility, handling materials arising from the excavation of the proposed flood alleviation channels. No information is provided about the types or volumes of materials that would be processed, nor the likely lifespan of the processing facility.	
Potential Landscape Enhancement Area & Potential Habitat Creation Area (Sunnymeads)	500577 175681 (N - centre) 500393 175463 (S – centre)	An area of some 13.5 ha to the north of the proposed channel & some 3.8 hectares to the south of the proposed channel. The land would be subject to landscaping, using materials arising from the excavation of the channels	
FCS21 – Major Structure	501092 175496	Construction or upgrading of a flood control structure to control flows of water between the waterbodoies denoted as 'Kingsmead Island Lake' to the west & 'Kingsmead 1(S)' to the east.	
FBR2 – Major Structure	500906 174823	Construction of a major structure, a pedestrian/cycle bridge crossing, to enable the channel to pass beneath an existing public footpath that is situated on a piece of land that lies at the south eastern end of the waterbody denoted 'Sunnymeads 3' in the Draft EIA Scoping Report (June 2017) for the RTS.	
FCS2 – Major Structure	501248 174397	Construction of a flood control structure, a fixed weir, to control flows of water down Channel Section 1(C-3), prior to the channel passing under the Windsor to London main rail line in a north east to south west direction.	
NR2 - Major Structure – Culvert under rail line	501236 174390	Construction of a major structure, either a culvert or bridge, to enable Channel Section 1 to pass under the main Windsor to London rail line, on the section of line that extends between Sunnymeads station to the north west & Wraysbury station to the south east.	

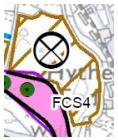
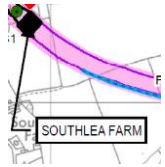
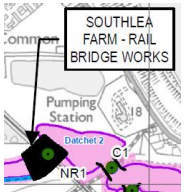
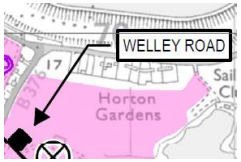
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
Channel Section 1(C-3) – Channel through natural ground	500852 174889 (NW) 501227 174490 (SE)	Construction of a channel through natural ground, measuring approximately **550m** in length & approximately 45m in width & 3m in depth, & accommodating one major structures (FBR2). The channel would commence at the south eastern end of the waterbody denoted 'Sunnymeads 3' in the Draft EIA Scoping Report (June 2017) for the RTS, and would terminate in an area of open land located to the south of the waterbody denoted 'Horton 2'. To include the installation of a slipway within the channel. **[Materials arising: 74,250 cubic metres of soils, sands, gravels & clays]**	
Channel Section 1(C-4) – Engineered channel through natural ground	501227 174490 (NW) 501236 174390 (SE)	Construction of an engineered channel through natural ground, measuring approximately **140m** in length & approximately 45m in width & 3m in depth, & accommodating one major structures (FCS2). The channel would commence in an area of open land located to the south of the waterbody denoted 'Horton 2' in the Draft EIA Scoping Report (June 2017) for the RTS, and would terminate at major structure NR2 on the northern side of the Windsor to London main rail line on the section that runs between Sunnymeads station to the north west & Wraysbury station to the south east. **[Materials arising: 18,900 cubic metres of soils, sands, gravels & clays]**	
LA3 - Major Structure - Bridge for Station Road, Wraysbury	501167 174273	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable the channel to pass beneath Station Road, Wraysbury, to the west of no.72 Station Road, Wraysbury, & to the east of an electricity sub-station that is located to the east of no.4 Tithe Lane, Wraysbury.	
Channel Section 1(C-5) – Engineered channel through landfill/ made ground	501167 174273 (NE) 501161 174191 (SW)	Construction of an engineered channel through landfill / made ground, measuring approximately **210m** in length & approximately 20m in width & 4m in depth, & accommodating one major structure (LA3). The channel would commence in the north east at the point where it emerges from major structure NR2 on the southern side of the Windsor to London main rail line on the section that runs between Sunnymeads station to the north west & Wraysbury station to the south east, & would terminate in the south at the point where it enters the waterbody denoted 'Wraysbury 2(N)' in the Draft EIA Scoping Report (June 2017) for the RTS. **[16,800 cubic metres of waste]**	

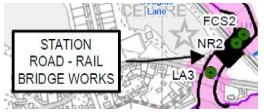
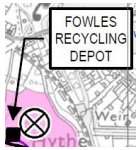
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
FW2A – Flood Embankment	501299 174335 (SW) 501551 174517 (NE)	Flood embankment of approximately 0.3m to 2m in height & approximately **320m** in length. Situated on parallel to an existing drainage ditch that is situated to the north of no.s 3, 1 & 9 Whitehall Lane, Horton. **[Materials required for embankment: between 240 cubic metres & 5,440 cubic metres]**	
FW2B – Flood Embankment	501331 174225 (N) 501372 173626 (S)	Flood embankment of approximately 0.3m to 2m in height & approximately **770m** in length. Situated on the eastern bank of the waterbody denoted as 'Wraysbury 2(N)' in the Draft EIA Scoping Report (June 2017) for the RTS, commencing in the north at the point where an existing drainage channel passes under Station Road, Wraysbury, & enters 'Wraysbury 2(N)', & terminating in the south at the point where another existing drainage channel connects to 'Wraysbury 2(N)'. **[Materials required for embankment: between 577.5 cubic metres & 13,090 cubic metres]**	
Separation / Protection Embankment & Bund	501164 173899 (W) 501198 173895 (E)	Construction of a separation/protection embankment between two areas of land situated within the waterbody denoted as 'Wraysbury 2(N)' in the Draft EIA Scoping Report (June 2017) for the RTS, which would measure **30m** in length, & be formed of either; sheet piles situated 5m apart & infilled with inert material & emerging to 1.5m above normal water level with a total estimated depth of 8m; or sloped embankments with a base footprint of 70m in width, a depth of an estimated 8m, & a peak width of an estimated 5m, emerging to 1.5m above normal water level. **[Materials required for sheet piled embankment: 1,200 cubic metres]** **[Materials required for sloped side embankment: 9,000 cubic metres]**	
Separation / Protection Embankment & Bund	501263 173873 (N) 501268 173847 (S)	Construction of a separation/protection embankment between two areas of land situated within the waterbody denoted as 'Wraysbury 2(N)' in the Draft EIA Scoping Report (June 2017) for the RTS, which would measure **25m** in length, & be formed of either; sheet piles situated 5m apart & infilled with inert material & emerging to 1.5m above normal water level with a total estimated depth of 8m; or sloped embankments with a base footprint of 70m in width, a depth of an estimated 8m, & a peak width of an estimated 5m, emerging to 1.5m above normal water level. **[Materials required for sheet piled embankment: 1,000 cubic metres]** **[Materials required for sloped side embankment: 7,500 cubic metres]**	

Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
Channel Section 1(D-1) – Channel through Natural Ground	501347 173799 (centroid)	Removal of an area of natural ground that extends to some **0.7 hectares** & is situated within the waterbody denoted as 'Wraysbury 2(N)' in the Draft EIA Scoping Report (June 2017) for the RTS, to increase the width & depth of the channel. The likely depth of the excavation is not stated, but is assumed to be equivalent to the depth of a channel through natural ground (i.e. 3m deep). **[Materials arising: 21,000 cubic metres of soils, sands, gravels & clays]**	
Separation / Protection Embankment & Bund	500974 173588 (N) 500977 173564 (S)	Construction of a separation/protection embankment between two areas of land situated within the waterbody denoted as 'Wraysbury 2(N)' in the Draft EIA Scoping Report (June 2017) for the RTS, which would measure approximately **23m** in length, & be formed of either; sheet piles situated 5m apart & infilled with inert material & emerging to 1.5m above normal water level with a total estimated depth of 8m; or sloped embankments with a base footprint of 70m in width, a depth of an estimated 8m, & a peak width of an estimated 5m, emerging to 1.5m above normal water level. **[Materials required for sheet piled embankment: 920 cubic metres]** **[Materials required for sloped side embankment: 6,900 cubic metres]**	
Channel Section 1(D-2) – Channel through Landfill / Made Ground	500973 173534 (NW) 501064 173485 (SE)	Removal of an area of landfill / made ground that measures some 15m across (north to south), & covers some **0.2 hectares**, to connect the waterbodies denoted as 'Wraysbury 2(N)' & 'Wraysbury 2(S)' in the Draft EIA Scoping Report (June 2017) for the RTS. The likely depth of the excavation is not stated, but is assumed to be equivalent to the depth of a channel through landfill (i.e. 4m deep). **[8,000 cubic metres of waste]**	
Separation / Protection Embankment & Bund	500962 173534 (N) 500890 173092 (S)	Construction of a separation/protection embankment between two areas of land situated within the waterbody denoted 'Wraysbury 2(S)' in the Draft EIA Scoping Report (June 2017) for the RTS, which would measure approximately **450m** in length, & be formed of either; sheet piles situated 5m apart & infilled with inert material & emerging to 1.5m above normal water level with a total estimated depth of 8m; or sloped embankments with a base footprint of 70m in width, a depth of an estimated 8m, & a peak width of an estimated 5m, emerging to 1.5m above normal water level. **[Materials required for sheet piled embankment: 18,000 cubic metres]** **[Materials required for sloped side embankment: 135,000 cubic metres]**	

Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
FCS3 – Major Structure	500994 173051	Construction of a flood control structure, a fixed weir, to control flows of water out from the waterbody denoted as 'Wraysbury 2(S)' into the next section of the proposed channel.	
LA4 – Major Structure – Bridge for B376 (Staines Rd / Wraysbury Rd)	500993 173035	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 1 to pass under the B376 (Staines Road / Wraysbury Road).	
FBR3 – Major Structure	501080 172799	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 1 to pass under the proposed route of a new public footpath/cycleway referred to on Drawing No. 122368-ENP-Z0-C1-DR-L-000030 (rev. P05.2) as the 'Magna Carta Way'.	
Channel Section 1(E-1) – Channel through Landfill / Made Ground	500994 173051 (N) 501008 172790 (SE)	Construction of an engineered channel through landfill / made ground, measuring approximately **310m** in length & approximately 20m in width & 4m in depth, & accommodating three major structures (FCS3, LA4 & FBR3). The channel would commence in the north at the southern end of the waterbody denoted 'Wraysbury 2(S)' in the Draft EIA Scoping Report (June 2017) for the RTS, & would proceed south & then south east to connect with the waterbody denoted 'Lower Hythe Gravel Pit 3'. To include the installation of a slipway within the channel. **[24,800 cubic metres of waste]**	
Channel Section 1(F-1) – Channel through Landfill / Made Ground	501123 172568 (NW) 501755 172121 (SE)	Construction of an engineered channel through landfill / made ground, measuring approximately **800m** in length & approximately 20m in width & 4m in depth, & accommodating three major structures (LA5, FCS4 & FBR4). The channel would commence in the north at the southern end of the waterbody denoted 'Lower Hythe Gravel Pit 3' in the Draft EIA Scoping Report (June 2017) for the RTS, & would proceed south east to connect with the River Thames south of the Bell Lock weir. To include the installation of a slipway within the channel, provision for fishing on the western bank of 'Lower Hythe Gravel Pit 3', & moorings to the east of LA5. **[64,000 cubic metres of waste]**	

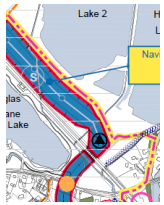
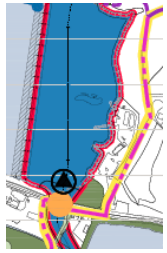
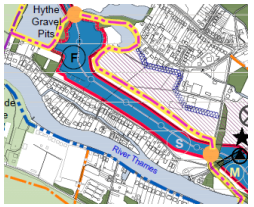
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
LA5 – Major Structure -	501561 172325	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 1 to pass under the Hythe End Road.	
FCS4 – Major Structure	501607 172304	Construction of a flow control structure, a fixed weir, to control flows of water between the waterbody denoted as ''Lower Hythe Gravel Pit 3' in the Draft EIA Scoping Report (June 2017) for the RTS, & the River Thames.	
FBR4 – Major Structure	501749 172128	Construction of a major structure, either a culvert or bridge, to enable Channel Section 1 to pass under an existing area of woodland, & connect to the River Thames.	
FW3 – Flood Embankment	501293 172700 (NW) 501580 172449 (SE)	Flood embankment of approximately 0.3m to 2m in height & approximately **470m** in length. Situated to the south of no.s 4a to 12 Feathers Lane, Hythe & the industrial land & premises occupied by Fowles Recycling Ltd. **[Materials required for embankment: between 352.5 cubic metres & 7,990 cubic metres]**	
Potential Temporary Material Processing Site (Hythe End)	501700 172410	Construction & operation of a temporary materials processing facility, handling materials arising from the excavation of the proposed flood alleviation channels. No information is provided about the types or volumes of materials that would be processed, nor the likely lifespan of the processing facility.	
Potential Temporary Material Processing Site (Fowles Recycling Depot)	501345 172550	Construction & operation of a temporary materials processing facility, handling materials arising from the excavation of the proposed flood alleviation channels. No information is provided about the types or volumes of materials that would be processed, nor the likely lifespan of the processing facility.	
Potential Landscape Enhancement Area (Fowles Recycling Depot)	501345 172550	The proposed Landscape Enhancement Areas (LEAs) will be used for the deposit of some of the material excavated during the construction of the proposed flood relief channels. No details have been provided of the amount of material that it is anticipated would be deposited across each of the LEAs, nor of the likely profiling of that material across each LEA.	

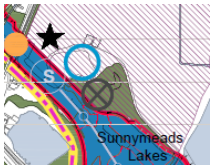
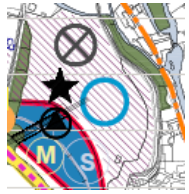
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
Potential Landscape Enhancement Area (Hythe End)	501700 172410	The proposed Landscape Enhancement Areas (LEAs) will be used for the deposit of some of the material excavated during the construction of the proposed flood relief channels. No details have been provided of the amount of material that it is anticipated would be deposited across each of the LEAs, nor of the likely profiling of that material across each LEA.	
Permanent Compound – Southlea Farm	498926 176350	A permanent compound accommodating kiosks to house the operational equipment required for the control of the flow control structure denoted 'IS1' (a gated weir) in the Draft EIA Scoping Report (June 2017) for the RTS. The compound would be located in an area of open land situated to the south of Beaulieu Close in Datchet.	
Temporary Compound – Southlea Farm	498935 176276	A temporary compound, situated on the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located in an area of open land situated to the east of the B3021 (Southlea Road).	
Temporary Compound – Southlea Farm Rail Bridge Works	499692 176078	A temporary compound, situated on the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located to the west of the section of the main rail line between Windsor & London that is situated between Datchet station in the north west & Sunnymeads station in the south east.	
Temporary Compound – Welley Road	500383 175695	A temporary compound, situated to the north of the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located in an area of open land situated to the east of the B376 (Welley Road).	

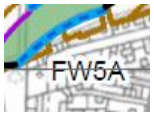
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
Temporary Compound – Station Road Rail Bridge Works	501236 174390	A temporary compound, situated on the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located to the west of the section of the main rail line between Windsor & London that is situated between Sunnymeads station in the north west & Wraysbury station in the south east.	
Temporary Compound – Fowles Recycling Depot	501607 172362	A temporary compound, situated on the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located in an area of open land situated to the east of Hythe End Road, Hythe.	
Potential Habitat Creation Area – Hythe End	501345 172550 (W) 501700 172410 (E)	The area of land affected encompasses the proposed LEAs at Hythe End & Fowles Recycling Depot. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS.	
Magna Carta Way – Section 1 (Datchet)	498560 176874 (NW) 500027 176187 (SE)	Creation of a new public right of way, offering foot & cycle access from Datchet along the route of proposed Channel 1, to Bell Weir at Hythe. The first section of the proposed 'Magna Carta Way' would measure some 2.1 km in length, & would commence at the intersection of Datchet High Street with the existing Thames Path, & would terminate on the B376 (Horton Road), to the north east of no.324 Horton Road. From that point the route would continue south west along an existing footpath.	
Magna Carta Way – Section 2 (Datchet 2 Lake to Sunnymeads 3 Lake)	499957 175841 (NW) 500872 174806 (SE)	Creation of a new public right of way, offering foot & cycle access from Datchet along the route of proposed Channel 1, to Bell Weir at Hythe. The second section of the proposed 'Magna Carta Way' would measure some 1.5km in length, & would commence to the south of 'Datchet 3 (S)' lake at the point where the existing public footpath from Horton Road turns south, the new path would continue in a south easterly direction parallel to the lake, & would terminate to the south of Kingsmead Island Lake, where an existing footpath provides a north-south link between Wraysbury & Horton.	

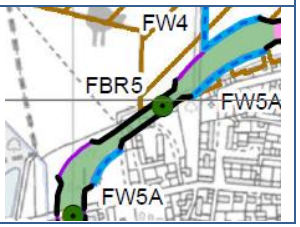
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)

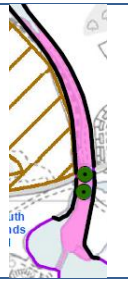
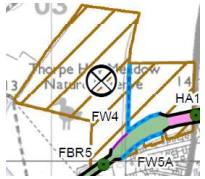
Channel Section 1: Datchet to Hythe End

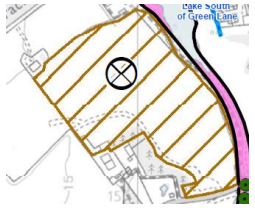
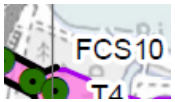
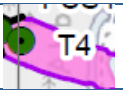
Scheme Component	NGRs	Description	
Magna Carta Way – Section 3 (Sunnymeads 3 Lake to Wraysbury 2 (N) Lake)	500935 174877 (NW) 501360 174222 (SE)	Creation of a new public right of way, offering foot & cycle access from Datchet along the route of proposed Channel 1, to Bell Weir at Hythe. The third section of the proposed 'Magna Carta Way' would measure some 1.1 km in length, & would commence to the west of Horton 2 lake & would travel south east parallel to the proposed Channel 1, terminating to the south of Station Road in Wraysbury & the north of Wraysbury 2(N) lake, at the point where a permissive pathway along the eastern shore of the lake commences.	
Magna Carta Way – Section 4 (Wraysbury 2 (S) Lake to Lower Hythe Gravel Pit 1 Lake)	501172 173450 (N) 500967 172942 (S)	Creation of a new public right of way, offering foot & cycle access from Datchet along the route of proposed Channel 1, to Bell Weir at Hythe. The fourth section of the proposed 'Magna Carta Way' would measure some 0.63km in length, & would commence at the point where the permissive path that runs along the eastern shore of Wraysbury 2(N) lake turns west & crosses the narrow stretch of land that currently separates that lake from Wraysbury 2(S), & would proceed south parallel to Wraysbury 2(S) passing to the east of the Silver Wings Sailing Club, & then heading west along the B376 (Wraysbury/Staines Road) & turning south on the western side of no.104 Staines / Wraysbury Road & terminating at the point where it joins a permissive path situated to the west of Lower Hythe Gravel Pit 2.	
Magna Carta Way – Section 4 (Lower Hythe Gravel Pit 1 Lake to River Thames at Bell Lock)	500861 172731 (NW) 501663 172166 (SE)	Creation of a new public right of way, offering foot & cycle access from Datchet along the route of proposed Channel 1, to Bell Weir at Hythe. The fifth section of the proposed 'Magna Carta Way' would measure some 1.53km in length, & would commence at the south western corner of Lower Hythe Gravel Pit 2, & would proceed in a south easterly direction, crossing Channel 1 via FBR3, & then proceeding south east on the northern bank of Channel 1 to Hythe End Road, where it would cross to the southern bank of Channel 1 & terminate at the weir at Bell Lock.	
New Primary Footpath / Cycleway – Kingsmead Island Lake to Colne Valley Way	501020 175008 (SW) 501888 175717 (NE)	Creation of a new public right of way, offering foot & cycle access between the proposed 'Magna Carta Way' & the existing 'Colne Valley Way'. The proposed route would measures some 1.28km & would commence at an existing footpath that passes north-south along the eastern shore of Kingsmead Island Lake, but would proceed eastward & cross the narrow strip of land that separates Horton 1 & Horton 2 lakes, before turning north along the eastern shores of Kingsmead 1(S) & Kingsmead 1(N) lakes, terminating at Stanwell Road, to the east of the property named 'The Hermitage'	

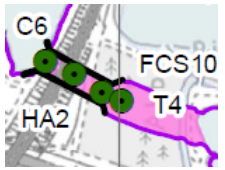
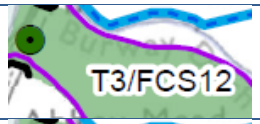
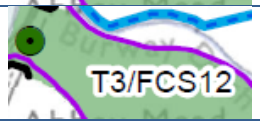
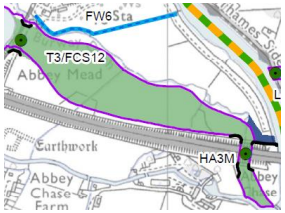
Planning Authority: Royal Borough of Windsor & Maidenhead (Berkshire)			
Channel Section 1: Datchet to Hythe End			
Scheme Component	**NGRs**	**Description**	
Car Park & Visitor Facilities at Sunnymeads LEA	500373 175657 (Visitor Facilities) 500443 175638 (Car Parking)	Construction of car parking areas & visitors facilities, potentially including facilities such as cafes & toilets. The scale of provision that would be made at any one site is not described in detail in the Draft EIA Scoping Report (June 2017) for the RTS.	
Car Park & Visitor Facilities at Hythe End LEA	501657 172377 (Visitor Facilities) 501731 172362 (Car Parking)	Construction of car parking areas & visitors facilities, potentially including facilities such as cafes & toilets. The scale of provision that would be made at any one site is not described in detail in the Draft EIA Scoping Report (June 2017) for the RTS.	

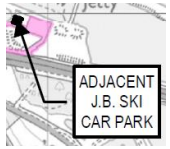
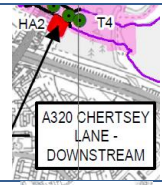
Planning Authority: Runnymede Borough Council (Surrey)			
Channel Section 2: Egham Hythe to Burway Ditch			
Scheme Component	**NGRs**	**Description**	
IS2 – Major Structure	503492 170122	Construction of an intake/inflow structure, a gated weir, to control flows of water between the River Thames & Channel Section 2 (Egham Hythe to Burway Ditch). IS2 would be situated to the north of no.119a Chertsey Lane, Staines-upon-Thames.	
HA1 – Major Structure – Bridge over A320	503460 170126	Construction of a major structure, a vehicular/all purpose bridge crossing to enable Channel Section 2 to pass under the A320 (Chertsey Lane). The bridge would be situated to the north & west of no.119a Chertsey Lane, Staines-upon-Thames.	
FW4 – Flood Embankment	503248 170311 (N) 503240 170073 (S) 503360 170133 (E)	Flood embankment of approximately 0.3m to 2m in height & approximately **360m** in length. Situated on the northern side of the proposed inlet channel from the River Thames for Channel Section 2, & extending along the northern bank of the Channel Section 2 for approximately 130m before turning directly north. **[Materials required for embankment: between 270 cubic metres & 6,120 cubic metres]**	
FW5A (N) – Flood Embankment	503240 170021 (W) 503372 170075 (E)	Flood embankment of approximately 0.3m to 2m in height & approximately **140m** in length. Situated on the southern side the proposed inlet channel from the River Thames for Channel Section 2, & situated to the north of properties located on Ferry Avenue. **[Materials required for embankment: between 105 cubic metres & 2,380 cubic metres]**	
FW5A(S) – Flood Embankment	503098 169905 (NE) 503035 169846 (SW)	Flood embankment of approximately 0.3m to 2m in height & approximately **100m** in length. Situated on the southern side the proposed Channel Section 2, & situated to the west of the properties named 'Claremont' & 'David's Haven' on Green Lane in Egham. **[Materials required for embankment: between 75 cubic metres & 1,700 cubic metres]**	
FBR5 – Major Structure	503167 169987	Construction of a flow control structure to control flows of water along Channel Section 2.	
FCS5 – Major Structure	503013 169792	Construction of a major structure, a vehicular / all purpose bridge, to enable Channel Section 2 to pass underneath Green Lane.	
FW5(B) – Flood Embankment	503135 169671 (W) 503255 169539 (SE)	Flood embankment of approximately 0.3m to 2m in height & approximately **230m** in length. Situated on the eastern side of the waterbody denoted 'Lake South of Green Lane' in the Draft EIA Scoping Report (June 2017) for the RTS. **[Materials required for embankment: between 172.5 cubic metres & 3,910 cubic metres]**	

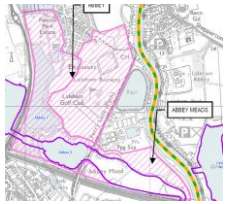
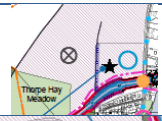
Planning Authority: Runnymede Borough Council (Surrey)			
Channel Section 2: Egham Hythe to Burway Ditch			
Scheme Component	**NGRs**	**Description**	
LA6 – Major Structure	503344 169071	Construction of a major structure, a vehicular/all purpose bridge, to enable Channel Section 2 to pass under Norlands Lane, situated to the west of residential properties located on Redwood in Thorpe.	
C2 – Major Structure	503342 169029	Construction of a major structure, a vehicular/all purpose bridge, to enable Channel Section 2 to pass under the haul route that services the former quarry & landfill at Coldharbour Lane in Thorpe.	
Channel Section 2 (A-1) – Engineered channel through natural ground	503538 170138 (E) 503461 170135 (W)	Construction of an engineered channel through natural ground, measuring approximately **90m** in length & approximately 45m in width & 3m in depth, & accommodating one major structure (IS2). The channel would commence in the east on the western bank of the River Thames, & would terminate at or under the A320 (Chertsey Lane). The construction of the channel would involve the demolition of two properties, no.s 119 & 117 Chertsey Lane, Staines-upon-Thames. **[** **[Materials arising: 12,150 cubic metres of soils, sands, gravels & clays]**	
Channel Section 2 (A-2) – Engineered channel through landfill / made ground	503461 170135 (E) 503369 170127 (W)	Construction of an engineered channel through landfill/man-made ground, measuring approximately **90m** in length & approximately 20m in width & 4m in depth, & accommodating one major structure (IS2). The channel would commence in the east at or under the A320 (Chertsey Lane), & would terminate in the west at the boundary of the former Royal Hythe Farm landfill site. **[7,200 cubic metres of waste material]**	
Channel Section 2 (A-3) –Channel & engineered channel through natural ground	503369 170127 (NE) 503013 169792 (SW)	Construction of a channel & an engineered channel through natural ground, measuring approximately **510m** in length & approximately 45m in width & 3m in depth, & accommodating one major structure (FBR5). The channel would commence in the east at the boundary of the former Royal Hythe Farm landfill site, & would terminate in the south west at the proposed Green Lane bridge (FCS5). **[Materials arising: 68,850 cubic metres of soils, sands, gravels & clays]**	

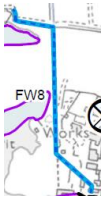
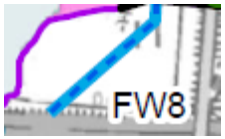
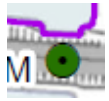
Planning Authority: Runnymede Borough Council (Surrey)			
Channel Section 2: Egham Hythe to Burway Ditch			
Scheme Component	**NGRs**	**Description**	
Channel Section 2 (A-7) – Engineered channel through landfill / made ground	503013 169792 (N) 503102 169546 (S)	Construction of an engineered channel through landfill/man-made ground, measuring approximately **250m** in length & approximately 20m in width & 4m in depth. The channel would commence in the north at the point where the channel passes under the Green Lane bridge (FCS5), & would terminate in the south at the waterbody denoted 'Lake South of Green Lane' in the Draft EIA Scoping Report (June 2017) for the RTS. **[20,000 cubic metres of waste material]**	
Channel Section 2 (A-8) – Engineered channel through landfill / made ground	503225 169420 (N) 503296 168874 (S)	Construction of an engineered channel through landfill/man-made ground, measuring approximately **590m** in length & approximately 20m in width & 4m in depth, & accommodating one major structure (IS2). The channel would commence in the north at the southern tip of the waterbody denoted 'Lake South of Green Lane' in the Draft EIA Scoping Report (June 2017) for the RTS, & terminate at the waterbodies denoted 'Lake South of Norlands Lane 1' & 'Fleet Lake'. The section would incorporate facilities to enable fishing. **[47,200 cubic metres of waste material]**	
Potential temporary material processing site (Royal Hythe)	503172 170239	Construction & operation of a temporary materials processing facility, handling materials arising from the excavation of the proposed flood alleviation channels. No information is provided about the types or volumes of materials that would be processed, nor the likely lifespan of the processing facility.	
Potential temporary material processing site (Norlands Lane)	502946 169431	Construction & operation of a temporary materials processing facility, handling materials arising from the excavation of the proposed flood alleviation channels. No information is provided about the types or volumes of materials that would be processed, nor the likely lifespan of the processing facility.	
Potential Landscape Enhancement Area & Potential Habitat Creation Area (Royal Hythe)	503172 170239	The proposed Landscape Enhancement Areas (LEAs) will be used for the deposit of some of the material excavated during the construction of the proposed flood relief channels. No details have been provided of the amount of material that it is anticipated would be deposited across each of the LEAs, nor of the likely profiling of that material across each LEA. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS.	

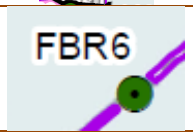
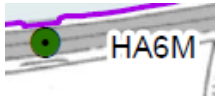
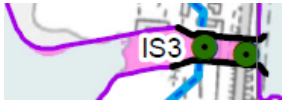
Planning Authority: Runnymede Borough Council (Surrey)			
Channel Section 2: Egham Hythe to Burway Ditch			
Scheme Component	**NGRs**	**Description**	
Potential Landscape Enhancement Area & Potential Habitat Creation Area (Norlands Lane)	502946 169431	The proposed Landscape Enhancement Areas (LEAs) will be used for the deposit of some of the material excavated during the construction of the proposed flood relief channels. No details have been provided of the amount of material that it is anticipated would be deposited across each of the LEAs, nor of the likely profiling of that material across each LEA. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS.	
FCS7 – Major Structure	503696 167850	Construction or upgrading of a flow control structure, gated weir, to control flows of water between the waterbodies denoted in the Draft EIA Scoping Report (June 2017) for the RTS as 'Abbey Lake' to the north & 'St Ann's Lake' to the south.	
FCS8 – Major Structure	502797 167963	Construction or upgrading of a flow control structure, fixed weir, to control flows of water between the waterbody denoted in the Draft EIA Scoping Report (June 2017) for the RTS as 'St Ann's Lake' & the Chertsey Bourne (Virginia Water to Chertsey) (EA Waterbody ID GB106039017070).	
FCS9 – Major Structure	503539 167552	Construction or upgrading of a flow control structure, gated weir, to control flows of water between the waterbodies denoted in the Draft EIA Scoping Report (June 2017) for the RTS as 'Twynersh Lakes'.	
C6 – Major Structure	503882 167802	Construction or upgrading of a flow control structure, gated weir, to control flows of water out of the waterbody denoted in the Draft EIA Scoping Report (June 2017) for the RTS as 'Abbey Lake'.	
HA2 – Major Structure – Bridge /culvert under A320	503914 167782	Construction of a major structure, a vehicular/all purpose bridge, to enable Channel Section 2 to pass under the A320 (Chertsey Lane), to the south east of Abbey Lake.	
FCS10 – Major Structure	503959 167744	Construction or upgrading of a flow control structure to control flows of water from the waterbody denoted in the Draft EIA Scoping Report (June 2017) for the RTS as 'Abbey Lake' to the west, into the next section of Channel Section 2.	
T4 – Major Structure	504002 167723	Construction of a major structure, for which no further details are provided or can be discerned.	

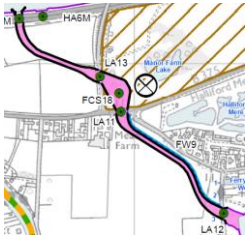
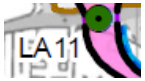
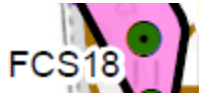
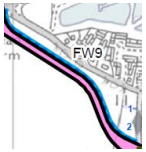
Planning Authority: Runnymede Borough Council (Surrey)			
Channel Section 2: Egham Hythe to Burway Ditch			
Scheme Component	**NGRs**	**Description**	
Channel Section 2 (B-1) – Engineered channel & channel through landfill / made ground	503882 167802 (W) 504134 167678 (E)	Construction of an engineered channel & channel through landfill/man-made ground, measuring approximately **290m** in length & approximately 20m in width & 4m in depth, & accommodating four major structures (C6, HA2, FCS10 & T4). The channel would commence in the west at the southern tip of the waterbody denoted 'Abbey Lake' in the Draft EIA Scoping Report (June 2017) for the RTS, & terminate at the east at the waterbody denoted 'Abbey 2'. **[23,200 cubic metres of waste material]**	
FCS12 – Major Structure	504508 167571	Construction of a flow control structure, fixed weir, to control flows of water between the waterbody denoted as 'Abbey 2' in the Draft EIA Scoping Report (June 2017) for the RTS, & the section of Channel Section 2 that would be situated to the east of Ferry Lane.	
T3– Major Structure	504508 167571	Construction of a major structure, a vehicular/all purpose bridge, to enable Channel Section 2 to pass under Ferry Lane), to the south east of the waterbody denoted 'Abbey 2' in the Draft EIA Scoping Report (June 2017) for the RTS.	
Channel Section 2 (C-1) – Engineered channel & channel through natural ground	504508 167571 (W) 505316 167045 (SE)	Construction of a channel & an engineered channel through natural ground, measuring approximately **510m** in length & varying between 75m & 220m in width & up to 3m in depth, & accommodating three major structures (FCS12, T3 & HA3M). The channel would commence in the west at the eastern end of the waterbody denoted 'Abbey 2' in the Draft EIA Scoping Report (June 2017) for the RTS, & would terminate in the south east, connecting to the River Thames south of Chertsey weir & lock. The section would incorporate moorings. **[Materials arising: 114,750 cubic metres of soils, sands, gravels & clays – assuming an average width of 150m & an average depth of 1.5m]**	
HA3M – Major Structure –Culvert under M3 motorway	505253 167217	Construction of a major structure, either a culvert or bridge, to enable Channel Section 2 to pass under the M3 motorway, to the north of Chertsey.	
FW6 – Flood Embankment	504555 167673 (W) 505043 167685 (E)	Flood embankment of approximately 0.3m to 2m in height & approximately **520m** in length. Situated along the southern perimeter of the Chertsey sewage treatment works facility, which is located to the north of the proposed channel across Abbey Mead. **[Materials required for embankment: between 390 cubic metres & 8,840 cubic metres]**	

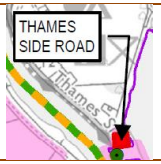
Planning Authority: Runnymede Borough Council (Surrey)			
Channel Section 2: Egham Hythe to Burway Ditch			
Scheme Component	**NGRs**	**Description**	
Permanent Compound – A320 Chertsey Lane – Intake	503444 170188	A permanent compound accommodating kiosks to house the operational equipment required for the control of the flow control structure denoted 'IS2' (a gated weir) in the Draft EIA Scoping Report (June 2017) for the RTS. The compound would be located in an area of open land situated within the former Royal Hythe landfill site at Egham Hythe.	
Temporary Compound – Norlands Lane Landfill	503232 169057	A temporary compound, situated to the west of the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located within the site compound of the closed Norlands Lane landfill site.	
Temporary Compound – adjacent to JB Ski car park	502916 167971	A temporary compound, situated on the southern bank of the waterbody denoted 'St Ann's Lake' in the Draft EIA Scoping Report (June 2017) for the RTS to the east of the proposed located of FCS8, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility.	
Permanent Compound – A320 Chertsey Lane - Downstream	503937 167747	A permanent compound accommodating kiosks to house the operational equipment required for the control of the flow control structure denoted 'FCS10' (a gated weir) in the Draft EIA Scoping Report (June 2017) for the RTS. The compound would be located in an area of open land situated to the east of the A320 (Chertsey Lane) & the north of the M3 motorway.	
Potential Habitat Creation Area - Abbey	504495 168154	The area of land affected encompasses Laleham golf course & Laleham Burway. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS.	

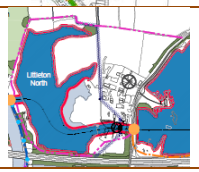
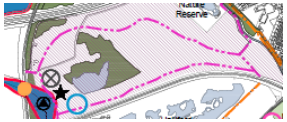
Planning Authority: Runnymede Borough Council (Surrey)			
Channel Section 2: Egham Hythe to Burway Ditch			
Scheme Component	**NGRs**	**Description**	
Potential Habitat Creation Area – Abbey Meads	504189 167815	The area of land affected encompasses the waterbody denoted 'Abbey 1' in the Draft EIA Scoping Report (June 2017) for the RTS, the area of land to the north of that lake, known as Penton Park Estate, the area of land to the south & east of the lake, & to the south of the proposed channel, & the area of land known as Abbey Meads, located to the south of the Chertsey sewage treatment works. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS.	
Primary Footpath/ Cycleway along Channel 2 between Ferry Avenue & Mixnams Lane	503447 170153 (N) 503979 168740 (S)	Creation of a new public right of way, offering foot & cycle access from the A320 (Chertsey Lane) to the north of Ferry Avenue in Staines-upon-Thames along the route of proposed Channel 2, to the junction of the A320 (Chertsey Lane) with Mixnams Lane at the south west corner of Penton Hook Marina. The pathway would measure some 2.4km in length & would link to an existing public right of way at its southern terminus.	
Primary Footpath / Cycleway from Mixnams Lane, south to Abbey 2 Lake & west to Chertsey Lane (A320) or east to Ferry Lane	504146 168764 (N) 503896 167716 (SW) 504543 167680 (SE)	Creation of a new public right of way, offering foot & cycle access from the eastern end of Mixnams Lane, south of Penton Hook Marina, along the eastern bank of the waterbody denoted 'Abbey 1' in the Draft EIA Scoping Report (June 2017) for the RTS to the northern bank of the waterbody denoted 'Abbey 2', & then turning either west on the northern side of the new channel linking 'Abbey Lake' & 'Abbey 2' to the A320, or turning east along the northern bank of 'Abbey 2' & terminating at Green Lake. The pathway would measure some 2.2km in length & would link to existing public rights of way at its south western & south eastern terminuses.	
Primary Footpath / Cycleway along Coldharbour Lane, Thorpe	502386 168726 (SW) 502868 168930 (NE)	Creation of a new public right of way, offering foot & cycle access along the route of Coldharbour Lane in Thorpe, linking to existing public rights of way at the south western & north eastern ends. The new pathway would measure some 530m.	
Car Park & Visitor Facilities at Royal Hythe LEA	503289,170125	Construction of car parking areas & visitors facilities, potentially including facilities such as cafes & toilets. The scale of provision that would be made at any one site is not described in detail in the Draft EIA Scoping Report (June 2017) for the RTS.	
Car Park & Visitor Facilities at Norlands Lane LEA	503273,169109	Construction of car parking areas & visitors facilities, potentially including facilities such as cafes & toilets. The scale of provision that would be made at any one site is not described in detail in the Draft EIA Scoping Report (June 2017) for the RTS.	

Planning Authority: Spelthorne Borough Council (Surrey)			
Channel Section 3: :Laleham to D'Oyly Carte Island			
Scheme Component	**NGRs**	**Description**	
LA7 – Major Structure	505360 167474	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 3 to pass under Thames Side.	
Channel Section 3(A-1) – Channel through natural ground	505360 167474 – W 505425 167471 - E	Construction of a channel through natural ground, measuring approximately **80m** in length & approximately 45m in width & 3m in depth. The channel would commence in the west on the eastern bank of the River Thames beneath the road known as Thames Side, & would terminate in the east at the waterbody denoted 'Littleton North' in the Draft EIA Scoping Report (June 2017) for the RTS. **[Materials arising: 10,800 cubic metres of soils, sands, gravels & clays]**	
FW8(N) – Flood Embankment	505689 167918 –NW 505908 167374 - S	Flood embankment of approximately 0.3m to 2m in height & approximately **690m** in length. Situated on to the east of the waterbody denoted 'Littleton North' in the Draft EIA Scoping Report (June 2017) for the RTS & the west of the mineral processing facility, industrial estate & aggregate recycling facility located off Littleton Lane, & extending from the north east corner of the lake to the point in the south at which Channel 3 would cut across the southern part of the Littleton Lane site. **[Materials required for embankment: between 517.5 cubic metres & 11,730 cubic metres]**	
FW8(S) – Flood Embankment	505881 167303 – NE 505777 167191 - SW	Flood embankment of approximately 0.3m to 2m in height & approximately **150m** in length. Situated to the south of the section of Channel 3 that will link the waterbody denoted 'Littleton North' in the Draft EIA Scoping Report (June 2017) for the RTS, with the waterbody denoted 'Littleton East' **[Materials required for embankment: between 112.5 cubic metres & 2,550 cubic metres]**	
HA5M – Major Structure – Bridge / culvert under M3 motorway	505710 167176	Construction or upgrading of a major structure, probably a culvert, to enable water to move under the M3 motorway, & to flow between the waterbody denoted 'Littleton North' in the Draft EIA Scoping Report (June 2017) for the RTS, & the waterbody denoted 'Littleton South'.	
IS3 – Major Structure	505884 167325	Construction or upgrading of an intake/inflow structure, a gated weir, to control flows of water between the waterbodies denoted as 'Littleton North' to the west & 'Littleton East' to the east.	

Planning Authority: Spelthorne Borough Council (Surrey)			
Channel Section 3: :Laleham to D'Oyly Carte Island			
Scheme Component	**NGRs**	**Description**	
LA9 – Major Structure – Bridge under Littleton Lane	505981 167317	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 3 to pass under Littleton Lane.	
Potential temporary material processing site – Shepperton Quarry	505993 167589	Construction & operation of a temporary materials processing facility, handling materials arising from the excavation of the proposed flood alleviation channels. No information is provided about the types or volumes of materials that would be processed, nor the likely lifespan of the processing facility.	
FBR6 – Major Structure	506452 167305	Construction of a major structure, a pedestrian / cycle bridge crossing, to enable water to flow between the waterbody denoted 'Littleton East' & the waterbody denoted 'Sheepwalk West 2' in the Draft EIA Scoping Report (June 2017) for the RTS.	
HA6M – Major Structure – Bridge / culvert under M3 motorway	506609 167206	Upgrading of an existing major structure, flood relief arches, to enable water to move under the M3 motorway, & to flow between the waterbody denoted 'Sheepwalk West 2' in the Draft EIA Scoping Report (June 2017) for the RTS, & the area of land to the south of the motorway.	
HA7M – Major Structure – Bridge / culvert under M3 motorway	506481 167215	Construction or upgrading of a major structure, probably a culvert, to enable water to move under the M3 motorway, & to flow between the waterbody denoted 'Sheepwalk West 2' in the Draft EIA Scoping Report (June 2017) for the RTS, & Channel Section 3(C-1).	
Channel Section 3(B-1) – Channel & engineered channel through landfill / made ground	505800 167331 (W) 506002 167331 (E)	Construction of an engineered channel & channel through landfill/man-made ground, measuring approximately **210m** in length & approximately 20m in width & 4m in depth, & accommodating two major structures (IS3 & LA9). The channel would commence in the west on the south eastern bank of the waterbody denoted 'Littleton North' in the Draft EIA Scoping Report (June 2017) for the RTS, & terminate at the east at the waterbody denoted 'Littleton East'. **[16,800 cubic metres of waste material]**	

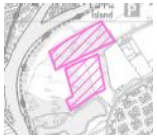
Planning Authority: Spelthorne Borough Council (Surrey)			
Channel Section 3: :Laleham to D'Oyly Carte Island			
Scheme Component	**NGRs**	**Description**	
Channel Section 3(C-1) – Engineered channel & channel through landfill / made ground	506481 167215 (NW) 507440 166343 (SE)	Construction of an engineered channel & channel through landfill/man-made ground, measuring approximately **1,400m** in length & approximately 20m in width & 4m in depth, & accommodating five major structures (HA7M, LA13, FCS18, LA11 & LA12). The channel would commence in the north west on the southern bank of the waterbody denoted 'Sheepwalk West 2' in the Draft EIA Scoping Report (June 2017) for the RTS, & terminate in the south east at the waterbody denoted 'Ferry Lane'. **[112,000 cubic metres of waste material]**	
LA13 – Major Structure – Bridge under Sheepwalk	506854 166961	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 3 to pass under Sheepwalk, to the north of its junction with Chertsey Road / Renfree Way.	
LA11 – Major Structure – Bridge under the B375 (Chertsey Road / Renfree Way)	506946 166795	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 3 to pass under Chertsey Road / Renfree Way, to the east of its junction with Sheepwalk.	
LA12 – Major Structure – Bridge under Ferry Lane	507377 166378	Construction of a major structure, a vehicular/all purpose bridge crossing, to enable Channel Section 3 to pass under Ferry Lane.	
FCS18 – Major Structure	506912 166868	Construction or upgrading of a flow control structure, a fixed weir, to control flows of water along the section of Channel Section 3 that links the waterbody denoted 'Sheepwalk West 2' in the Draft EIA Scoping Report (June 2017) for the RTS, and the waterbody denoted 'Ferry Lane'.	
FW9 – Flood Embankment	506970 166790 (NW) 507369 166376 (SE)	Flood embankment of approximately 0.3m to 2m in height & approximately **600m** in length. Situated on the northern side of proposed Channel Section 3, commencing to the south of the junction of Chertsey Road & Renfree Way, running parallel to Chertsey Road as it skirts the southern perimeter of Old Shepperton, & terminating at Ferry Lane, south of its junction with Chertsey Road. **[Materials required for embankment: between 450 cubic metres & 10,200 cubic metres]**	

Planning Authority: Spelthorne Borough Council (Surrey)			
Channel Section 3: :Laleham to D'Oyly Carte Island			
Scheme Component	**NGRs**	**Description**	
Potential temporary materials processing site (Sheepwalk East / Manor Farm)	507072 166903	Construction & operation of a temporary materials processing facility, handling materials arising from the excavation of the proposed flood alleviation channels. No information is provided about the types or volumes of materials that would be processed, nor the likely lifespan of the processing facility.	
Potential Landscape Enhancement Area & Potential Habitat Creation Area (Sheepwalk East / Manor Farm)	507243 167083 (centroid)	The proposed Landscape Enhancement Areas (LEAs) will be used for the deposit of some of the material excavated during the construction of the proposed flood relief channels. No details have been provided of the amount of material that it is anticipated would be deposited across each of the LEAs, nor of the likely profiling of that material across each LEA.	
FCS19/FBR7 – Major Structures	507686 166098	Construction or upgrading of a flow control structure, a fixed weir, to control flows of water between the waterbody denoted as 'Ferry Lane' in the Draft EIA Scoping Report (June 2017) for the RTS & the River Thames. Construction of a footbridge to enable access over the proposed Channel Section 3 as it exits the 'Ferry Lane' waterbody.	
Channel Section 3 (D-1) – Engineered channel & channel through natural ground	507673 166130 (N) 507682 166072 (S)	Construction of a channel through natural ground, measuring approximately **60m** in length & approximately 45m in width & 3m in depth. The channel would commence in the north on the southern bank of the waterbody denoted 'Ferry Lane' in the Draft EIA Scoping Report (June 2017) for the RTS, & would terminate at the northern bank of the River Thames. **[Materials arising: 8,100 cubic metres of soils, sands, gravels & clays]**	
Permanent compound – Thames Side Road	505364 167534	A permanent compound accommodating kiosks to house the operational equipment required for the control of a flow control structure (which one is not specified). The compound would be located in an area of open land situated to the south east of no.230 Thames Side, Chertsey.	
Temporary compound – Littleton Lane	505929 167410	A temporary compound, situated to the north of the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located in an area of land situated within the Littleton Lane minerals processing complex at Shepperton.	

Planning Authority: Spelthorne Borough Council (Surrey)			
Channel Section 3: :Laleham to D'Oyly Carte Island			
Scheme Component	**NGRs**	**Description**	
Temporary compound – Sheepwalk Landfill (W)	506532 167132	A temporary compound, situated to the east of the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located in an area of open land situated to the south of the M3 motorway, & the west of Sheepwalk.	
Temporary compound – Sheepwalk Landfill (E)	506917 166989	A temporary compound, situated to the north of the proposed alignment of the flood relief channel, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located in an area of open land situated to the south of the M3 motorway, & the east of Sheepwalk.	
Potential Habitat Creation Area – Sheepwalk (W)	506520 166984 (centroid)	The area of land affected is situated to the west of Sheepwalk, & comprises a former mineral working & landfill that has been restored to agricultural land. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS.	
Primary Footpath / Cycleway around Littleton North Lake	506230 167827 (NE) 505968 167307 (SE)	Creation of a new public right of way, offering foot & cycle access across land situated to the north, west & south of the waterbody denoted 'Littleton North' in the Draft EIA Scoping Report (June 2017) for the RTS, linking to an existing public right of way at the south eastern ends. The new pathway would measure some 2.1km.	
Primary Footpath / Cycleway around Manor Farm (Sheepwalk East) LEA	507675,167319 (NE) 507806,167009 (SE) 506917,166803 (SW)	Creation of a new public right of way, offering foot & cycle access around the Manor Farm (Sheepwalk East) LEA & habitat creation area, linking to existing public rights of way at the south eastern & north eastern ends, & a new path to the south west. The new pathway would measure some 2.8km.	
Primary Footpath / Cycleway along Channel 3 at Old Shepperton	506936,166791 (NW) 507361,166382 (SE)	Creation of a new public right of way, offering foot & cycle access along the route of Channel Section3 to the south west of Old Shepperton, commencing in the north west at the Manor Farm (Sheepwalk East) LEA & terminating in the south east at Ferry Lane. The new pathway would measure some 620m.	

Planning Authority: Spelthorne Borough Council (Surrey)			
Channel Section 3: :Laleham to D'Oyly Carte Island			
Scheme Component	**NGRs**	**Description**	
Primary Footpath / Cycleway between Manor Park & Old Shepperton	507972 167032 (N) 507961 166911 (S)	Creation of a new public right of way, offering foot & cycle access between Manor Park & Old Shepperton, linking to an existing public right of way to the north east. The new pathway would measure some 130m.	
Car Park & Visitor Facilities at Manor Farm (Sheepwalk East) LEA	507020 166890	Construction of car parking areas & visitors facilities, potentially including facilities such as cafes & toilets. The scale of provision that would be made at any one site is not described in detail in the Draft EIA Scoping Report (June 2017) for the RTS.	

Planning Authority: Elmbridge Borough Council (Surrey)			
Scheme Component	**NGRs**	**Description**	
Desborough Cut Widening	507955 165967 (W) 508907 166141 (E)	The northern bank of the Desborough Cut would be widened by approximately 3m along the whole of its 1km length, & the channel would be deepened by approximately 1.5m underneath the two bridges located at the western & eastern ends of the Cut, in each case affecting an area of approximately 0.12 hectares. **[Estimated CD&E waste: 3,600 cubic metres for deepening of the channel under the two bridges, & 6,000 cubic metres for the widening works (assuming a depth of 2m) – total arisings 9,600 cubic metres]**	
Sunbury Weir Works	510786 168421 (S) 510768 168486 (N)	Construction of a new weir complex with three dipping radial weir gates through Sunbury Lock Ait, involving the cutting of a new channel measuring 12m in width, 75m in length & 5m in depth through the island. **[Estimated CD&E waste: 4,500 cubic metres]**	
Temporary compound – Hurst Park	514282 169256	A temporary compound to be used in association with the works proposed at Molesey Weir, for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located within Hurst Park, at the north eastern end of Sadlers Ride, on the southern bank of the River Thames.	
Potential Habitat Creation Area – Desborough Island	508176 166239 (centroid)	The area of land affected is situated on the western side of Desborough Island. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS.	

Planning Authority: London Borough of Richmond upon Thames (Greater London)			
Scheme Component	**NGRs**	**Description**	
Molesey Weir Works (Weir C)	514911 168970	The proposed works are in the LBRUT section of Molesey weir. The capacity improvements would be achieved by replacing the existing overfall weir & salmonid fish pass on weir C with two dipping radial weir gates & a multi species fish pass (with a combined width of approximately 13m).	
Teddington Weir Works	516714 171527	The capacity improvements at this weir will be achieved by constructing a new weir complex with five dipping radial gates through Teddington Lock Island. An approximately 20m wide, 20m long & 5m deep channel will be cut through the island, approximately 10m upstream of the existing boat rollers & 70m downstream of the footbridge. **[Estimated CD&E waste: 2,000 cubic metres]**	
Ham Lands Flood Storage Area & Potential Habitat Creation Area	516503,172868 (N – centroid) 516548,172700 (S – centroid)	An area of woodland approximately 4.5ha within North Ham Lands, which is currently above the floodplain level, will be excavated, lowering the ground level by approximately 2m to allow water from the River Thames to sit in the area during periods of high flows. The excavated material will be reused locally, within North Ham Lands to form a landscape feature. The precise nature of the types of habitats that would be created is not described in the Draft EIA Scoping Report (June 2017) for the RTS. **[Estimated CD&E waste: 90,000 cubic metres]**	
Temporary compound – Broom Road Recreation Ground	517765,170584	A temporary compound, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located within the Ham Lands, to the south of the River Thames & the north of Riverside Drive in Ham.	
Temporary compound – Ham Lands compound	516695,172563	A temporary compound, to be used for the storage of plant, materials & to provide welfare facilities, & possibly for the storage of temporary stockpiles of material prior to transport to a processing facility. The compound would be located within the Broom Road recreation ground, on the western bank of the River Thames in the borough of Richmond-upon-Thames.