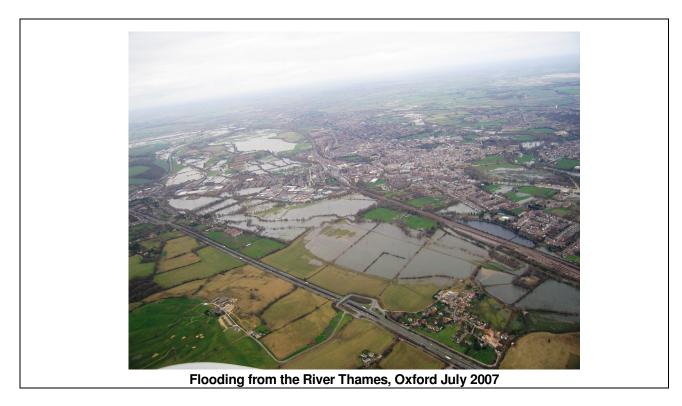


Oxford Flood Alleviation Scheme Integrated Assurance & Approval Plan (IAAP)

Scheme Refe	rence	ENVIMSE500177
Scheme Name	Oxford	Flood Alleviation Scheme



Date	20 February 2017
Version	2.0
OXFC COUNCIL	ORDSHIRE RFCC
Doc Ref: Oxfor	d Flood Allaviation Scheme Integrated Accurance and Approvale Plan

Oxford Flood Alleviation Scheme Integrated Assurance and Approvals Plan Richard Harding 20 02 17 v2.0

IAAP for Oxford Flood Alleviation Scheme

Version	Status	Signed by:	Date signed	Date issued
1.0	First draft (internal PM team only)	RH	03/11/2014	03/11/2014
1.1	Updated for SRO comments	RH	10/11/2014	10/11/2014
1.2	Updated for further SRO comments following Ian Hodge review	RH	18/11/2014	18/11/2014
1.3	Updated following comments from Programme Board	RH	28/11/2014	28/11/2014
1.4	Updated following finalisation of major projects approvals route	RH	23/02/2015	23/02/2015
1.5	Updated assurance and approvals route (figures 3 and 4)	RH	23/02/2015	23/02/2015
1.6	Minor amendment to Oxford StAR approval status	RH	27/02/2015	27/02/2015
1.7	Minor updates following changes to SOC	RH	06/05/2015	06/05/2015
1.8	Updates following January 2016 IAAS release	RH	20/05/2016	20/05/2016
1.9	Updates preceding OBC submission to LPRG	RH	04/02/2017	04/02/2017
<mark>2.0</mark>	Updates following Sponsoring Group Review	<mark>RH</mark>	<mark>20/02/2017</mark>	<mark>20/02/2017</mark>

Oxford Flood Alleviation Scheme Integrated Assurance & Approval Plan

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1 Scheme context

Oxford has developed around the River Thames and sits at the confluence of 7 rivers draining a predominately rural catchment area of approximately 3000km2. The River Thames is generally slow to respond to rainfall and floods are long in duration. The floodplain narrows significantly immediately downstream of Oxford which increases flood levels through the city. Flooding has been exacerbated by historical development. The channels and structures that cross the river do not have sufficient capacity to allow the flood water to flow through, even for smaller, more frequent, floods.

The River Thames and its tributaries at Oxford have a large developed floodplain without flood defences. If nothing was done to manage flood risk, approximately 2,500 properties would be at risk in a flood that has a 1 in 100 chance of occurring in any year (a 1% AEP event). The Environment Agency's existing flood risk management activities reduces this but around 1,500 properties still remain at risk. This proposal will reduce the likelihood of flooding for all of these properties, with over 1,200 benefiting from a standard of protection up to the 1 in 100 chance flood event. If we don't take action the impacts of climate change means that 3,431 properties will be at flood risk in 50 years time.

Critical infrastructure is at risk and traffic disruption is a significant problem during floods, including main arterial routes into the city centre and the railway line, which forms a key part of the strategic freight network. Once the roads close, traffic quickly builds up back to the A34 which stops traffic movement around the city. The impacts to transport links and property combined with the long duration of flooding brings Oxford to a standstill. In addition to the direct damages it also has the result of reducing investment, limiting growth opportunities and therefore has a much wider impact on the whole city of Oxford than just the floodplain.

Following successive floods a local partnership was formed to initiate a project to ensure that Oxford is protected from the most frequent floods to ensure it continues to thrive. It set challenging objectives to reduce flood risk to homes and businesses, to keep transport links open, to safeguard Oxford's reputation as being open for business and to enhance environmental and recreational opportunities.

This Outline Business Case has developed the shortlisted options from the Strategic Outline Case, which focus on improving the flow capacity of the floodplain. This is in line with the strategic approach for this area. It identifies option 5b - a medium sized channel and associated defences – as the preferred economic choice, delivering a net present value of £1,020 million and a benefit:cost ratio of 10:1.

The scheme is forecast to cost £121.11 million. This total includes £116.36 million of design and construction costs and £4.75 million as a commuted sum for the first 10 years of maintenance. Risk has been allowed for in the estimates and is 31.4% of the remaining design and construction cost. Significant partnership funding of £51.05 has been secured, with £4.35 million in the final stages of agreement. When the present value is entered into the partnership funding calculator the project achieves an adjusted partnership funding score of 100%.

The delivery approach for the main construction contract will be via the Water and Environmental Management Framework. This framework has been developed specifically to deliver best value flood and coastal risk management projects. Construction duration is estimated to be 3 years and will deliver an operational scheme by August 2021.

This Outline Business Case seeks approval to develop the Full Business Case. The Full Business Case will procure the value for money solution, set out the contract for the deal and set out the detailed management arrangements for the delivery and operation and maintenance phases. This will be the final control point before entering into a delivery contract. This will bring the total development cost of the project to £12.2 million and includes £2.3 million risk contingency.

2 Assurance and approval planning for the project

Integrated assurance and approval is defined as the planning, coordination and provision of assurance activities and approval points from project initiation to project closure. This ensures that assurance reviews are timed to inform business case approval points.

Project assurance helps manage risk and improve delivery confidence. This supports the Senior Responsible Owner and the project team whilst providing funders and stakeholders with the confidence that the project can deliver to time, budget and quality.

The Oxford Flood Alleviation Scheme exceeds the £100 million departmental spending delegation. It therefore requires HM Treasury approval and undergoes rigorous and robust assurance, proportionate to its value.

This Integrated Assurance and Approvals Plan is the means by which the corporate Integrated Assurance and Approvals Strategy is applied to the project. It is mandatory for all major projects to have an Integrated Assurance and Approvals Plan in place. The Oxford Flood Alleviation Scheme assurance is designed around the three lines of assurance set out in the corporate integrated assurance and approvals strategy.

- 1st line of assurance (Frontline) reviews and checks carried out within the project to help ensure quality standards are being followed and the principle of "getting it right first time" is being achieved. This includes the oversight and challenge from the partnership governance groups.
- 2nd line of assurance (Management overview and compliance) these reviews are carried out to ensure that the frontline controls are working, and operating standards are being complied with.
- 3rd line of assurance (Independent assurance) carried out by people totally independent of project/programme delivery. It checks that both the frontline and management overview compliance assurance is working.

The scheme's overall approach is to consider reviews findings and recommendations as coming from a critical friend. Recommendations are actively welcomed as it is acknowledged that addressing these helps to strengthen the overall likelihood of successful delivery and ensure that the Oxford Flood Alleviation Scheme can leave a lasting legacy within the communities it serves.

A streamlined process for major project assurance and approval is being trialled within the Defra group. This brings together what would have been a series of separate reviews into the Environment Agency Large Projects Review Group. Support is then gained via the Flood and Coastal Risk Management Committee of the Environment Agency Board and Defra's Executive Committee before being submitted to HM Treasury for approval. The Oxford Flood Alleviation Scheme follows this process.

3 Purpose and scope of this IAAP

We use this Integrated Assurance and Approvals Plan to plan and deliver assurance and approval activities in a coordinated way. We actively use the schedule to identify both opportunities and risks in the assurance and approvals timeline. This helps us to make the process as efficient as it can be.

The Oxford Flood Alleviation Scheme is a partnership project and benefits from having a partnership Sponsoring Group and Programme Board as part of its overall governance. All partners have signed a Memorandum of Understanding which sets out their agreement to work together to promote, develop and deliver the scheme.

The Sponsoring Group supports the Senior Responsible Owner in discharging their accountability for the Scheme providing strategic direction and ensuring proposals continue to be aligned with their organisation's strategic priorities.

The Programme Board supports the Project Director in driving forward the programme to deliver the outcomes and benefits within the tolerances set by the Sponsoring Group. Members of the Programme Board are able to commit resources from their organisations to support the project as required.

These groups help to provide ongoing oversight and challenge to the project team and are integral part to the overall assurance process applied to the project.

This Integrated Assurance and Approvals Plan focuses on the appraisal stage of the project up to the Full Business Case. We will update this plan to include additional detail on assurance activities that will be needed during the construction phase as part of the Full Business Case submission.

This is a living document that will be maintain through to project closure.

4 Assessment of risks and determination of assurance requirements

We use the standard Risk Potential Assessment form in order to assess the overall risk of the project environment within the national context.

We completed the first Risk Potential Assessment at project initiation and discussed the findings with Defra and HM Treasury in August 2014. Through this we agreed that the Oxford Flood Alleviation Scheme is a Medium Risk project in the national context and that we could produce the Strategic Outline Business without completing a Project Validation Review.

We reviewed the Risk Potential Assessment in December 2016 as part of preparing for the Outline Business Case submission. This concluded that the project remains Medium Risk.

We will discuss the need for external reviews with the Environment Agency, Defra and Infrastructure and Projects Authority to identify whether a review at each submission stage will add value. If required we will organised the reviews through Defra's Departmental Assurance Coordinator.

We completed an external Gateway 1 review in April 2015 as part of the assurance and approval of the Strategic Outline Case. The review team found that it is likely the project will achieve its objectives and can be delivered successfully. They also acknowledged that the scheme is being delivered using an exemplar and innovative partnership approach that covers funding and is also achieving public and political support. They gave the project an amber rating with 9 recommendations to consider. This was considered to be a good outcome at this stage of project development. We have addressed all the recommendations as part of the development of the Outline Business Case.

We held a joint meeting with the Infrastructure and Projects Authority, Defra and the Environment Agency in January 2017 to discuss future assurance and approvals arrangements. The view, subject to written confirmation, was that separate external gateway reviews will not be required as part of the Outline Business Case and Full Business Case submissions. The requirements of the gateway reviews will be incorporated within the enhanced Large Project Review Group scrutiny of the business case. This further enhances the streamlining of Defra group major projects.

5 Planned assurance coverage and scheduling

First line of assurance (frontline)

We undertake the following activities to ensure we are complying with operational standards.

Table 1 – First line of assurance (frontline) review activities on the Oxford FloodAlleviation Scheme

Activity	Description	
Produce a project integrated assurance and approvals plan	The Oxford Flood Alleviation Scheme Integrated Assurance and Approvals Plan details the assurance and approvals activities the scheme intends to carry out and the approach for consequential assurance.	
	This is reviewed and updated before the submission of each stage of the business case and after each main assurance activity is complete.	
Quality review of key documents	The Project Executive reviews the following key documents prior to commencing each stage of the project:	
	Work package scopes	
	Technical reportsCommunications and Engagement Strategy	
	Configuration Management Strategy	
	Risk Management Strategy	
	Project Quality PlanBenefits Realisation Strategy	
Peer review of key documents	We peer review key documents through internal staff members, our framework suppliers, or external specialists in order to give confidence in the document findings.	
	Work that has undergone peer review:	
	 Flood Modelling; carried out by Capita Economic assessment; carried out by Professor Edmund Penning-Rowsell 	
	 Materials Management Plan; carried out by Andy Powell – 	
	Senior Advisor, Delivery Assurance, Environment Agency	
	 Outline design; carried out by project team Procurement Strategy; carried out by Project Executive 	
	Work planned to be subject to peer review:	
	 Detailed design Planning permission documentation 	
	 Business cases 	
Project governance	The Oxford Flood Alleviation Scheme benefits from a partnership approach to project governance and delivery. The partnership has members on all 3 governance groups. Expertise and seniority	

Activity	Description
	increases at each level to ensure robust scrutiny and challenge to the project team. The 3 project governance groups are:
	Project BoardProgramme BoardSponsoring Group
	We review and agree the Terms of Reference for each group before each business case submission. This helps ensure that the governance groups are able to apply the appropriate level of scrutiny and challenge for the next stage of the project.
	Specifically, partners on the Sponsoring Group have delegated their representative to support the submission of the business case for assurance and approval on their organisations behalf.
	Partners maintain their own corporate assurance and approvals in respect of any financial contributions they make towards the scheme.
Project reporting	Project progress is reported monthly via the:
	Highlight reportProject and Programme Management Tool report
	These reports include the latest baseline and forecast programme and cost figures. The highlight report includes updates on key work streams and key risks, with a RAG (Red, Amber, Green) rating and relevant comments for each.
Issue and risk management	We maintain a project issue register and a project risk register. This helps us to pro-actively manage risks and close out issues and helps us maintain our delivery focus.
	The registers are updated by the Project Manager and reviewed by the Project Executive on a monthly basis.
Health checks	We will carry out an internal health check review 6 months prior to the Full Business Case submission. This will check whether previous review recommendations have been completed before the project makes its major transition to delivery. The Assurance and Approvals Manager will be responsible for undertaking this review and sharing the findings with the Project Director.
Project closure	We will complete a Project Evaluation Review at project closure. This will be via a questionnaire and facilitated lessons learned workshop. Findings will be uploaded to the lessons learned database to help share best practice and continuous improvement items.
Post project reviews	Post project reviews are identified within the business case but are outside the scope of this Integrated Assurance and Approvals Plan.

Activity	Description
	The project closure documentation will detail the post project reviews schedule and will be provided to the Project Sponsor.

Second line of assurance (management overview/compliance)

These are the reviews carried out by the wider business to ensure the frontline controls are working and operational standards are being complied with.

Table 2 – Second line of assurance (management overview/compliance) activities on the Oxford Flood Alleviation Scheme

Activity	Description
Environment Agency - Large Projects Review Group (LPRG)	The Large Projects Review Group is an assurance group consisting of technical and policy experts from across the Environment Agency and Defra. It provides a detailed and thorough review on business case submissions.
Environment Agency – Capital investment Programme Quarterly Reporting (NPP5)	We provide a quarterly report to the Environment Agency's national programme management office. This enables them to review progress as part of the wider 6 year capital investment programme.
Accounting Officers' test review	The Environment Agency's Investment and Delivery Assurance Team carry out a review of the project against the 5 Accounting Officer tests of: - Regularity - Propriety - Value for money - Feasibility - Affordability This accompanies the business case submission to Defra's Executive Committee to help inform their decision on whether or not to submit the business case to HM Treasury for approval.

Third line of assurance (independent assurance)

These are the reviews carried out by independent groups to check that all other assurance systems are operating effectively on the project.

Table 3 – Third line of assurance (independent assurance) activities on the Oxford FAS

Activity	Description
External Gateway Reviews	These external reviews are carried out by accredited reviewers from other government departments. Following discussion with the Infrastructure and Projects Authority, Defra and the Environment Agency further external gateway reviews are not anticipated.

Activity	Description
	If required these would be coordinated via Defra as the lead government department.
HM Treasury	The Oxford Flood Alleviation Scheme exceeds Defra's delegated expenditure limit. HM Treasury will undertake its own assurance of the business case submissions prior to granting approval to proceed.

6 Roles and responsibilities

The following tables present the responsibilities for each role within the assurance and approvals plan and all groups who have an input into the governance of the Oxford Flood Alleviation Scheme.

Individual / Groups	Responsibilities
HM Treasury	To review the Oxford Flood Alleviation Scheme business case and provide final investment approval.
Defra Executive Committee	To review the Oxford Flood Alleviation Scheme business case and agree the submission to HM Treasury.
Environment Agency Investment & Delivery Assurance Team	• To provide an assurance review of the business case against the Accounting Officer tests prior to presentation of the business case at the Executive Committee.
Environment Agency FCRM Committee	To review the Oxford Flood Alleviation Scheme business case and agree the submission to Defra.
Chief Executive	To provide strategic guidance on the project.
Executive Director of Operations	To act individually or jointly as required by the financial scheme of delegation.
Environment Agency Director of Operations	
Environment Agency Large Projects Review Group (LRPG)	• To provide an assurance review of business case submissions for compliance with Defra policy, Treasury guidance and flood risk appraisal guidance. Recommend the business case for submission to approval groups.
Senior Responsible Owner (SRO)	Accountable for the delivery of the project.
Project Sponsor	Promoting the project to Directors and ensuring alignment with Environment Agency objectives. Co-chairs the project Sponsoring Group.
Sponsoring Group	 Agree objectives and provide strategic direction for the project. Advise on issues raised within the Sponsoring Group's tolerances. Secure high level partnership funding approaches for the project. Endorse and support the project business case through approval gateways. Facilitate partnership and collaborative working to deliver the scheme. Act as critical friends as required internally to ensure the project remains robust throughout its delivery.

Table 4 – Roles & Responsibilities

	 Champion the project: leading by example, communicating the benefits to all stakeholders, and gaining local support and political will to progress the scheme. Providing continued commitment and endorsement in support of the project objectives at executive and community events. Providing a recommendation to the SRO for project closure when required.
Programme Board	 Advising the Sponsoring Group on issues that exceed the Programme Board tolerances. Provide direction on issues raised within the Programme Board tolerances. Advising the project on reputation and political risks for consideration in decision making. Ensuring high priority red risks are being actively managed. Endorsing partnership and collaborative working to deliver the scheme. Endorsing and supporting the project through approval gateways.
Project Board	• To manage project issues and risks within tolerances set by the Programme Board. The Project Board meet by exception, as deemed necessary by the Project Executive.
Project Director	 Responsible for the alignment of the technical requirements with the Sponsor's aims and objectives. Responsible for communications and engagement on the project Leadership of the project delivery team
Project Executive	• Day to day management of the project including programme and costs via the Project Managers and external consultants providing specialist skills.
Assurance and Approvals Manager	 Manages the process and procedure defined in this Integrated Assurance and Approvals Plan

Table 5 – Assurance Roles and Responsibilities (RACI)

Responsible Accountable Consulted Informed	Production of IAAP	Quality review of key documents	Peer review of key documents	Project governance	Project reporting	Issue and risk management	Health checks	Project closure	Post project reviews	EA LPRG Review (Including Defra)	FCRM Committee Review	EA- NPP5 reporting	Defra Executive Committee Approval	External Gateway Reviews	HM Treasury Approval	Project closure	Post project reviews
Role																	
HM Treasury	I							С	I	I	I		I	I	С	С	I
Defra	С		I					С	Т	С	I		С	С	R	С	I
SRO	Α		С	Α	I		I	Α	Α	I	I		Α	Α	Α	Α	Α
Project Sponsor	С		С	С	-		I	С	R	С	С		С	С	С	С	R
Project Director	С	Α	Α	R	A	Α	Α	R		Α	A	A	С	С	С	R	
Sponsoring Group	I		С	С	Ι	I		С		Ι	Ι		Ι	Ι	Ι	С	
Programme Board	С	1	С	С	I	С	I	С		I	Ι		Ι	I	I	С	
Project Executive	С	R	R	С	С	С	С	С		R	R	С	С	С	С	С	
Project Manager	С	С	С	1	R	R	I	I		I	I	С	I	I	I	I	
Assurance and Approvals Manager	R	С	С	С	I	I	R	С		С	С	I	R	R	С	С	
Funding & Benefits Realisation Manager				I	С		Т	I				R	I	I		I	
Corporate functions	С			I	I		I	I	I	Ι	Ι	Ι	I	I	Ι	I	I
Project Board	I	С	С	С	I			I		I	Ι					I	

Table 6 – Governance Roles and Responsibilities (RACI)

Responsible Accountable Consulted Informed	Sponsoring Group	Programme Board	Project Director	Project Executive	Project Manager	Assurance and Approvals Manager	Funding and Benefits Realisation Manager	Strategic Engagement Manager	Project team
Memorandum of Understanding	А	С	R	I	I	I	I	I	
Objectives	А	С	R	С	I	С	С	I	I
Terms of Reference	А	С	R	С		С	С		
Baseline programme change	А	С	R	С	I	I	I	I	I
Baseline financial changes	А	С	R	С	l		С		
OBC submission	А	С	R	С	I	С	С	С	I
FBC submission	А	С	R	С	I	С	С	С	I
Project Control Docs			А	R	I	С	I	I	I
Tolerances			А	R	I	С			I
Project Deliverables				А	R	С	С	C	С

7 Approvals

The value of the Oxford Flood Alleviation Scheme exceeds Defra's delegated spending limit. This means that we have to gain the support of the Flood and Coastal Risk Management Committee of the Environment Agency's Board as well as Defra's Executive Committee in order to submit the business case to HM Treasury for approval. We will have completed the previously explained assurance reviews prior to submission to these groups. This ensures that they are able to make their decisions based on sound and robust evidence.

We use the 5 Case Model approach for our business case. This is in line with Treasury Green Book guidance. In the 5 Case Model the business case is developed over 3 stages. This ensures proposals continue to provide ongoing justification as they are developed. The 3 stages of development are the:

Strategic Outline Case (SOC) Outline Business Case (OBC) Full Business Case (FBC)

Once Full Business Case approval is obtained the construction contract can be let and the project will transition to its delivery phase.

We have already gained approval of the Strategic Outline Case for the Oxford Flood Alleviation Scheme and are in the final preparations for the submission of the Outline Business Case.

Separately, we have gained Financial Scheme of Delegation Approval within the Environment Agency to start work delivering the detailed design and to prepare for the submission of the planning application. This provides the opportunity to deliver an operational scheme at least 12 months sooner than otherwise would be possible.

8 Cost and resources

We value the benefit and support that well managed assurance can bring to the project. In order to achieve this we have an Assurance and Approvals Manager (0.8 FTE) who delivers the requirements of the Integrated Assurance and Approvals Plan and provides practitioner level advice on the 5 case model to the team. They are supported by an Assurance Officer (1 FTE) who providse the secretariat service to the scheme's governance groups, delivers the information management plan, and assists with the scheduling and tracking of assurance and approvals activities. These roles are directly charged to the project and form part of the baseline costs. Corporate assurance and approval activities are not recharged to the project.

9 Reporting and communications

We report and communicate progress using the following tools:

Report	Frequency	Produced by	Approved by	Reviewed by	Outcomes via
Highlight	Monthly	Project	Project	Programme	Minutes of
Report		Executive	Director	Board	meeting
NPP5 report	Quarterly	Funding	Project	EA National	Email
	-	and	Director	Programme	
		Benefits		Management	
		Manager		Office	
PPMT	Monthly	Project	Project	Environment	Minutes of
Report		Manager	Executive	Agency Area Portfolio Board	meeting

Table 7 – assurance reporting

Significant deviations or exceptions between standard reporting periods will be discussed by the project executive and project director and escalated via project and corporate reporting lines as necessary.

10 Managing outcomes, consequential assurance and escalation

Development and approval of each stage of the business case provides a mandate for the Senior Responsible Owner to continue the project. This may be accompanied by assurance recommendations that are required to be addressed prior to submission of the next stage the business case. The Senior Responsible Owner is responsible for the implementation of the actions and recommendations from assurance review reports.

Consequential assurance and escalation is exceptional and the need for these is identified outside of this Integrated Assurance and Approvals Plan. If additional measures are required this plan will be updated to reflect the additional requirements.

11 Schedule

The key assurance and approval milestones for the Oxford Flood Alleviation Scheme are summarised in the table below. It is complimented with a detailed assurance schedule for the Outline Business Case on the following page.

Table 8 – Key assurance and approval milestones

Activity	Date	Approver where applicable
OBC Submission and Assurance Start	Feb 2017	
OBC Approval	June 2017	HMT
FBC Submission and Assurance Start	June 2018	
FBC Approval	Sep 2018	HMT
Construction Contract Award	Sep 2018	
EA Gateway 4 (Readiness for service)	Aug 2021	SRO
Contract Completion and Project Closure	Aug 2022	
EA Gateway 5 (Contract Completion)	Aug 2022	SRO



Table 9 – Outline Business Case Assurance schedule

							17/18 Financial Year													
Assurance/Approval expected start date	Primary client	Last review date	D	J	F	М	A	М	J	J	А	S	0	N	D	J	F	М		
	-	-		P	rogramm	e Milesto	nes													
HMT approval point (OBC)	HMT								16-Jun											
Defra ExCo approval point (OBC)	Defra							02-May												
EA FCRM Ctteapproval point (OBC)	Environment Agency						04-Apr													
Strategic Outline Business Case	HMT	Approved 1 September 2015																		
				l	nd ep end e	ent Assura	nce	-	-		•	•				•				
Project Validation Review	Project Director	Not required																		
OGC Gateway 1	Defra/SRO	Completed May 2015																		
					Functiona	al Assuran	ce													
Accounting Officers' test report	ExCo					31-Mar														
LPRG (OBC)	FCRM Ctte				22-Feb	28-Mar														
Governance - OBC Submission	Sponsoring Group				09-Feb															
Financial - PPMT APB					M onthly reviews as per PPM T update schedule															