

**National R&D and Operational Investigation
Project Resumés**

Anglian Region PAB (April 1994)

R&D Section



NRA

National Rivers Authority

National R&D Projects

ENVIRONMENT AGENCY



124718

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: The Effect of Sediment Metals on Marine Benthic Organisms

Proposal Number:

n/a

NRA Project Manager:

Brian Barnett

Project Number:

0105

Function:

WQ

Budget:

199_0/1	199_1/2	199_2/3
97.4	107	42

199_3/4	199_
3	

Reporting Relationships:

Project Board:

Topic Leader (ex. Alistair Ferguson)
Bill Forbes

Project Support Group:

Alistair Ferguson
R&D Section

Quality Review Panel:

Appropriate Water Quality group (Ecotox WG)

Project Size:

Large

Start Date:

4/90

End Date:

4/93

New End Date:

4/94

Contractor:

PML

Outputs:	Type:	Due:	Comments:	Date: 11/4/94
Draft Final Report (First)		11/92	Overall Project Objective: To investigate linkages between organometal and heavy metal contamination in estuaries and deleterious effects on benthic organisms Current Status: Delayed due to the death of PML research leader. Draft reports edited and returned. Final draft very good quality. Final reports received and waiting sign-off and dissemination.	
Draft Final Report (Second)		01/94		
Project Record (Final Check)		03/94		
R&D Note		04/94		
R&D Project Record		04/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Disease Status of Fish as an Indicator of Water Quality

Proposal Number: D02(90)2

NRA Project Manager: Ian Hirst

Project Number: 0229

Function: F

Budget:	199_0/1	199_1/2	199_2/3
	8	31.8	44.2

Reporting Relationships:

Budget Manager:

A Wood

Project Support Group:

R&D Section
A Owen (Southern)

Quality Review Panel:

N Milner
A Owen
Chris Mills
Topic Group

Project Size: Small

Start Date: 10/90

End Date: 10/93

New End Date: 6/94

Contractor: In House (Brampton)

Outputs:	Type:	Due:	Comments:	Date: 29 March 1994
Interim Report		11/91	Overall Project Objective: To determine the general health of fish populations within the NRAs jurisdiction and evaluate the use of fish health as an indicator of water quality. Current Status: First draft final report assessed in 10/93. Revised draft report now being produced by Project Manager.	
Interim Report		11/92		
Draft Final Report (First)		10/93		
Draft Final Report (Second)		4/94		
R&D Note		6/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

R&D Anglian Region - E:\document\pub-rrv.fm

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Broad Spectrum Sensors

Proposal Number: A15(90)6

NRA Project Manager: Paul Waldron

Project Number: 0247

Function: WQ

Budget:

199_0/1	199_1/2	199_2/3
10	38	58

199_3/4	199_4/5
53	2

Project Size:

Medium

Start Date:

12/90

End Date:

11/93

New End Date:

5/94

Contractor:

WRc/Luton University

Reporting Relationships:

Project Board:

P Williams
M Pearson

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section
Instrumentation Group
WQ Managers
Analytical Methods Group

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Interim Progress		8/91	Overall Project Objective: To develop and test in the laboratory and in the field a prototype instrument, incorporating biosensors, allowing a rapid assessment of toxicity of aqueous samples. Current Status: Draft final report being reviewed by QRP on a National basis.	
Progress		6/91		
Progress		4/92		
Progress		9/91		
Interim Progress		2/92		
Progress		1/92		
Progress		8/92		
Interim Progress		9/92		
Progress		10/92		
Progress		12/92		
Interim Progress		2/93		
Progress		3/93		
Draft Interim Progress		7/93		
Progress		7/93		
Interim Progress		7/93		
Progress		9/93		
Progress		1/94		
Draft Final Report		3/94		
R&D Note		5/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Low Flow Estimation in Artificially Influenced Catchments

Proposal Number: B02(90)3

NRA Project Manager: Nigel Fawthrop

Project Number: 0257

Function: WR

Budget:	199_0/1	199_1/2	199_2/3
	35	66	69

	199_3/4	199_4/5
	39	3

Project Size: Medium

Start Date: 12/90

End Date: 11/93

New End Date: 5/94

Contractor: I H

Reporting Relationships:

Project Board:

Mike Owen
R Streeter
Graham Wilson

Project Support Group:

R&D Section
M Knowles
T Evans (Mott MacDonald)
E Bramley (Yorkshire Water)
G Petts (Birmingham Univ)

Quality Review Panel:

R&D Section
Project Support Group
B02 Topic Group
R Streeter

Outputs:	Type:	Due:	Comments:	Date: 29 March 1994
Progress		2/91	Overall Project Objective: To develop procedures for estimating low flows on catchments where processes are artificially influenced. Current Status: Draft final report reviewed and returned to Contractor. R&D Note being printed now. Beta Testing of improved program is now being planned.	
Progress		4/91		
Progress		7/91		
Progress		2/92		
Interim Progress		12/91		
Progress		7/92		
Progress		4/92		
Progress		10/92		
Interim Progress		12/92		
Progress		2/93		
Interim Progress		12/92		
Progress		5/93		
Draft Final Report		12/93		
R&D Note		5/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

R&D Anglia Region - L:\document\pub-cw-2m

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Production and Fate of Blue-Green Algal Toxins

Proposal Number: A08(90)4

NRA Project Manager: Mick Pearson

Project Number: 0271

Function: WQ

Budget:	199_0/1	199_1/2	199_2/3
	85.8	102.9	123.15

	199_3/4	199_4/5
	95	10

Project Size: Large

Start Date: 12/90

End Date: 8/94

New End Date:

Contractor: Dundee University

Reporting Relationships:

Project Board:

Phil Chatfield
John Seager
Peter Chave

Project Support Group:

R&D Section
Alistair Ferguson
Toxic Algal Task Group

Quality Review Panel:

Alistair Ferguson
Toxic Algal Task Group
John Seager
(Other International experts are being appointed)

Outputs:	Type:	Due:	Comments:	Date: 29 March 1994
Progress		5/91	Overall Project Objective: To investigate the production and fate of cyanobacterial toxins in the environment in order to elucidate effective management strategies related to cyanobacterial blooms and scums. Current Status: Project has achieved all objectives to date. Final experiments are being undertaken on fate of the toxin in fish. Project due to end by late August 1994, after external review by international panel.	
Interim Progress		11/91		
Interim Progress		1/92		
Progress		11/92		
Interim Progress		5/93		
Summary Progress		1/94		
Draft Final Report		5/94		
Final Report (R&D Note)		8/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Lakes - Classification and Monitoring

Proposal Number: A08(90)1

Project Number: 0286

NRA Project Manager: Geoff Phillips

Function: WQ

Budget:	199_0/1	199_1/2	199_2/3
	15.8	45.6	44.98

	199_3/4	199_4/5
	14	2

Project Size: Medium

Start Date: 1/91

End Date: 7/93

New End Date: 4/94

Contractor: Liverpool University

Reporting Relationships:

Project Board:

John Seager
Mark Everard
Mick Pearson

Project Support Group:

Liverpool University
R&D Section

Quality Review Panel:

M Everard
J Gough
R Sweeting
A Ferguson
B Harbott
D Brewin
P Raven
+ other members of Steering Group

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Progress		7/91	Overall Project Objective: To develop an effective monitoring and classification system for standing water which will allow assessment against water quality objectives and provide an overall assessment of ecological quality that will assist in meeting proposed EC Directives Current Status: Project work complete.	
Progress		1/92		
Progress		7/92		
Interim Progress		12/92		
Draft Final Report		11/93		
R&D Note		4/94	Draft Final report reviewed by QRP. Final report due early April 1994.	
Project Record		4/94		
			Phase 2 due to start by August 1994.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title:

Geochemical Process Modelling

Proposal Number:

A07(90)1

NRA Project Manager:

Mark Grout

Project Number:

0295

Function:

WR

Budget:

199_0/1	199_1/2	199_2/3
8	30.3	26.7

199_3/4	199_4/5
23.5	2

Project Size:

Small

Start Date:

6/90

End Date:

3/94

New End Date:

5/94

Contractor:

BGS

Reporting Relationships:

Project Board:

G Wilson

Project Support Group:

R&D Section

P Hart

R Harris

Quality Review Panel:

R&D Section

J Seager

Project Steering Group

Topic Group

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Interim Progress		9/91	Overall Project Objective: To review, assess and develop modelling techniques for representing subsurface contaminant transport arising from typical pollution problems which occur in England and Wales. Current Status: Project final outputs are being produced. The draft final report has been reviewed and returned by QRP. Appendices are being assessed. Outputs are expected May 1994 Project objectives have been achieved. An excellent review of models has been produced.	
Progress		8/91		
Progress		12/91		
Progress		3/92		
Interim Progress		10/92		
Interim Progress		10/92		
Interim Progress		10/92		
Interim Progress		8/92		
Interim Progress		8/92		
Progress		3/93		
Progress		6/93		
Draft Final Report (Partial)		11/93		
Draft Final Report (Partial)		11/93		
Draft Final Report (Partial)		1/94		
Draft Final Report (Partial)		1/94		
Final Report (R&D Note)		5/94		
Final Report (R&D Project Record)		5/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Fish Stock Assessment Methodology

Proposal Number: D02(91)2

Project Number: 0325

NRA Project Manager: Irven Forbes

Function: F

Budget:	199_1/2	199_2/3	199_3/4
	40	21.9	7

199_4/5	199_
7	

Project Size: Small

Start Date: 6/91

End Date: 12/92

New End Date: 5/94

Contractor: WRc

Reporting Relationships:

Budget Manager:

A Wood

Project Support Group:

D Cragg-Hine
R&D Section

Quality Review Panel:

Steering Group
Topic Group
Fisheries Managers
R&D Section
Chris Mills

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Progress		9/91	Overall Project Objective:	
Interim Progress		11/91	To evaluate and develop efficient fishery survey strategies	
Interim Progress		6/92	and methodologies and produce practical guidelines for their	
Progress		4/94	implementation in NRA stock.	
Progress		8/92	Current Status:	
Progress		10/92	Project objectives completed.	
Progress		12/92		
Draft Guidelines		1/93	Draft reviewed by Steering Group in August 1993. Rewrite	
Progress		3/93	by contractor received by February 1994.	
Progress		7/93		
Draft Final Report (First)		5/93	Revised Draft now being assessed prior to publication.	
Draft Final Report (Second)		3/94		
R&D Note		5/94		
Guidelines		5/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Modelling of Blue-Green Algal Blooms

Proposal Number: A05(91)3

NRA Project Manager: Mick Pearson

Project Number: 0327

Function: WQ

Budget:	199_1/2	199_2/3	199_3/4
	76	61	6

199_4/5	199_
2	

Project Size: Medium

Start Date: 9/91

End Date: 5/93

New End Date: 7/94

Contractor: FBA

Reporting Relationships:

Project Board:

Phil Chatfield
P Chave

Project Support Group:

R&D Section
Phil Chatfield
Paul Biggins
Alistair Ferguson

Quality Review Panel:

Paul Biggins
Topic Group
TAPS Centre
R&D Section
Alistair Ferguson
Toxic Algal Task Group

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Interim Progress		12/91	Overall Project Objective: To develop predicative models to quantify algal blooms, including blue-green algae, in relation to environmental variables. Current Status: Program is complete and is being reviewed by NRA staff in Peterborough. One program stable other regions will be asked to review. Project has achieved its objectives. Draft Final Report will be reviewed as program undergoes tests in Regions.	
Interim Progress		6/92		
Interim Progress		12/92		
Draft Final Report (First)		2/93		
Draft Final Report (Programme Guide)		6/93		
Final Report		7/94		
Program (PROTEC)		7/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

R&D Anglian Region - E:\document\pub-new.htm

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Physical Environment for River Invertebrate Communities

Proposal Number: A08(91)5

NRA Project Manager: Peter Barham

Project Number: 0346

Function: RCN

Budget:	199_1/2	199_2/3	199_3/4
	31	33	34

199_4/5	199_
3	

Project Size: Medium

Start Date: 4/91

End Date: 3/94

New End Date: 6/94

Contractor: Leicester University

Reporting Relationships:

Project Board:

R Howell
M Child

Project Support Group:

R Howell
R&D Section
N Holmes

Quality Review Panel:

Paul Raven
Topic Group
R&D Section
R Howell

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Interim Progress		10/91	Overall Project Objective: To develop a unified method for the ecological assessment of "functional habitat" analysis for the use by flood defence engineers and water quality and conservation scientists. Current Status: Draft final report expected April 1994 (due January 1994). Retention taken into 1994/1995 to cover outstanding work.	
Interim Progress		3/92		
Progress		10/92		
Interim Progress		8/93		
Interim Progress (Draft)		12/91		
Draft Final Report		4/94		
R&D Note		6/94		
R&D Project Record		6/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title:

Development of Fixed Test Kit for Blue-Green Algal Toxins

Proposal Number:

A05(91)2

NRA Project Manager:

Mick Pearson

Project Number:

0348

Function:

WQ

Budget:

199_1/2	199_2/3	199_3/4
52	50	0

199_4/5	199_
20	

Project Size:

Medium

Start Date:

9/91

End Date:

3/94

New End Date:

12/94

Contractor:

Biocode Ltd

Reporting Relationships:

Project Board:

Paul Williams
John Seager
Mervyn Bramley

Project Support Group:

R&D Section
Alistair Ferguson
Dundee University

Quality Review Panel:

John Seager
R&D Section
Toxic Algal Task Group

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Interim Progress		2/92	Overall Project Objective: to develop a field test kit for the detection of cyanobacterial toxins Current Status: project progress affected by technical difficulties. Contractor undertaking a revised work programme at their own cost to develop an antibody to a toxin component, ADDA. On completion of this item, the final stage of the project will be undertaken and monies committed.	
Interim Progress		5/92		
Interim Progress		8/92		
Interim Progress		11/92		
Interim Progress		2/93		
Antibody Produced		8/94		
Kit Developed		12/94		
Draft Final Report		10/94		
Final Report		12/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Field Validation of Algal Toxin Test Kit

Proposal Number: A05(91)4

NRA Project Manager: Mick Pearson

Project Number: 0349

Function: WQ

Budget:	199_1/2	199_2/3	199_3/4
	33	34	21

199_	199_

Project Size: Small (links to 348)

Start Date: 9/91

End Date: 5/93

New End Date: 4/94

Contractor: Dundee University

Reporting Relationships:

Project Board:

John Seager
Paul Williams
Mervyn Bramley

Project Support Group:

R&D Section
Alistair Ferguson
Mervyn Bramley

Quality Review Panel:

John Seager
R&D Section
Toxic Algal Task Group

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Progress		1/92	Overall Project Objective: To validate for NRA the development and performance of the field test kit for Microcystin-LR, developed by Biocode and develop procedures for its use by NRA staff. Current Status: Draft Final Report delivered. Short review to follow, followed by signing-off. Project is ending now, in absence of completion of Project 348. Project to be re-worked if Project 348 achieves its objectives, Contractor work has been very good. Non-completion is no reflection on their competence or expertise.	
Interim Progress		8/92		
Progress		4/92		
Progress		10/92		
Progress		2/93		
Progress		4/93		
Progress		11/93		
Draft Final Report		3/94		
Project Record		4/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

April 1994

Produced by R&D Section

Title: Review of Biomanipulation

WQ01995/94

Liverpool University

R&D Section
Mervyn Bramley
Alistair Ferguson
John Scager

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Draft Final Report		2/94	<p>Overall Project Objective: To consider whether it is worth investing further research and development in the use of biomanipulation as a means of controlling phytoplankton growth in lakes.</p> <p>Current Status: Review is being undertaken by QRP and Blue-Green Algal Task Group.</p> <p>The final R&D Note is being produced by 5/94</p>	
Final Report		5/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: JoNuS Study

Proposal Number: A04(91)7

NRA Project Manager: Chris Ashcroft

Project Number: 0390

Function: WQ

Budget:	199_1/2	199_2/3	199_3/4
	50	3	11.9

199_4/5	199_5/6
16	12

Project Size: Small

Start Date: 11/91

End Date: 9/95

New End Date:

Contractor: MAFF/UEA

Reporting Relationships:

Project Board:

Mick Pearson

Project Support Group:

R&D Section
Derek Sayers
Mark Everard

Quality Review Panel:

R&D Section
Topic Group

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Interim Progress	LATE	3/92	Overall Project Objective: To understand the scale, trends and processes of nutrient cycling in major East Coast estuaries and coastal waters. Current Status: The project funds work by UEA being part of the wider MAFF project (collaboration). Contractor has consistently not submitted reports. R&D Section has concerns regarding the management of the contractor. R&D Section has contacted UEA direct and a report will be prepared by end May 1994 to cover all the LATE reports as detailed above. Technical work progressing to schedule.	
Interim Progress	LATE	9/92		
Progress		12/92		
Interim Progress	LATE	3/93		
Progress	LATE	6/93		
Interim Progress	LATE	9/93		
Progress	LATE	12/93		
Interim Progress	LATE	3/94		
Progress		6/94		
Interim Progress		9/94		
Progress		12/94		
Interim Progress		3/95		
Progress		6/95		
Draft Final Report		9/95		
Final Reports		After Review		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Chlorophyll *a*: SCA Method Revision

Proposal Number:

n/a

NRA Project Manager:

Alistair Ferguson

Project Number:

0395

Function:

WQ

Budget:

199_2/3

199_3/4

199_4/5

7

0

0

199_

199_

Project Size:

Small

Start Date:

3/92

End Date:

3/93

New End Date:

5/94

Contractor:

IFE

Reporting Relationships:

Project Board:

M Pearson

Project Support Group:

R&D Section

R Sweeting

Quality Review Panel:

R Sweeting

R&D Section

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Progress		5/92	Overall Project Objective: To update the SCA method for the determination of Chlorophyll <i>a</i> Current Status: First draft final report was sent to Laboratory Government Chemists for validation. Performance data not supplied by contractor and further work undertaken in 1993/1994 to obtain this. Revised draft being assessed by NRA staff. Project due for completion in 5/94.	
Draft Final Report (First)		12/92		
Draft Final Report (Second)		3/94		
Final Report		5/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Post Project Appraisal of Conservation Enhancement of Flood Defence Schemes

Proposal Number: F1(91)11

NRA Project Manager: Peter Barham

Project Number: 0400

Function: RCN

Budget:	199_1/2	199_2/3	199_3/4
	5	27	23

199_4/5	199_
24	

Project Size: Small

Start Date: 3/92

End Date: 3/95

New End Date:

Contractor: Loughborough Univ

Reporting Relationships:

Project Board:

M Child

Project Support Group:

R&D Section

N Holmes

S Powers

M Diamond

Paul Raven

Quality Review Panel:

R&D Section

N Holmes

S Powers

M Diamond

Paul Raven

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Interim Progress		2/92	Overall Project Objective: To develop a method for post-project appraisal of habitat conservation and enhancement works and to assess the value of such works in relation to natural recovery from NRA operational schemes. Current Status: The project is in the final year of work.	
Progress		9/92		
Progress		3/93		
Progress		9/93		
Interim Progress		9/94		
Draft Final Report		12/94	Statagic liaison with Project 317, "Alternative River Maintenance Strategies" and "River Habitat Survey Development". Project on target to complete by end 94/95.	
Final Report		3/95		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Lone Worker Alarm - Prototype Development

Proposal Number: G01(92)1

NRA Project Manager: David Dunn

Project Number: 0409

Function: General

Budget:	199_2/3	199_3/4	199_4/5
	25	20	60

199_	199_

Project Size: Large (TBC)

Start Date: 9/92

End Date: 3/95

New End Date:

Contractor: TBC (KDSC Consult)

Reporting Relationships:

Project Board:

K Bond
N Reeder
Mervyn Bramley

Project Support Group:

R&D Section
KDSC Consultants
Procurement Section Head Office
Legal Section Head Office
Steering Group (P Parkinson, D Tripp, G Dolby, R Warne, A Godfrey)

Quality Review Panel:

Steering Group
KDSC Consultants
R&D Section

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
TBC			Overall Project Objective: To develop a lone worker alarm for use by lone staff working in the field, linked to PMR networks.	
Satellite Report		9/93	Current Status: Two contracts: Prototype development (+ supply of working alarm); supervision contract - awarded to KDSC.	
Tender Appraisal Report		TBC	Research + Development (supply) contract under EC Tendering requirements. Currently being evaluated with the help of HO Procurement and Legal Sections. Tender will be agreed by mid-May 1994. Contract will be let by mid-June. R&D section to supply PAB with progress reports on a monthly basis.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Emergency Sealing of Breaches: Phase 1 and 2

Proposal Number: C08(91)3

NRA Project Manager: Andrew Bullivant

Project Number: 0431

Function: FD

Budget:	199_2/3	199_3/4	199_4/5
	5	10	20

199_	199_

Project Size: Small

Start Date:	11/92	4/94
End Date:	6/93	12/94
New End Date:	3/94	

Contractor: Halcrow Posford

Reporting Relationships:

Budget Manager:

Robert Runcie

Project Support Group:

R&D Section
Flood Defence Managers
Senaka Jayasinghe

Quality Review Panel:

Senaka Jayasinghe
L Pickles
R&D Section

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Phase 1:			Overall Project Objective:	
Interim Progress		5/93	To undertake a state-of-the-art review of emergency sealing	
Draft Final Report		6/93	of breaches in sea, tidal and fluvial defences and the	
Project Record		1/94	production of an operational guideline.	
Phase 2:			Current Status:	
Interim Progress Report		TBC	Phase 1 complete.	
Draft Final Report		TBC		
R&D Note		TBC	Phase 2 contract now let for the production of a guidance	
Project Record		TBC	manual for emergency sealing of breaches and scoping a	
			training programme for its implementation.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: National Database for Monitoring Data - Phase 1

Proposal Number: C6(92)13

NRA Project Manager: Daniel Leggett

Project Number: 0441

Function: FD

Budget:	199_3/4	199_4/5	199____
	9.5	1	

199____	199____

Project Size: Small

Start Date: 6/93

End Date: 12/93

New End Date: 5/94

Contractor: Carl Bro Haiste

Reporting Relationships:

Budget Manager:

Robert Runcie

Project Support Group:

R&D Section
Haiste (Contractor)

Quality Review Panel:

Lindsay Pickles - Flood Defence Commissioner
Mike Owen - Topic Advisor
Geoff Brighty - Anglian Region R&D Coordinator
Keith Slaney - Northumbria/Yorkshire
David Pilkington - South Western
Andrew Fraser - North West
Peter Barham - Anglian

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Draft Final Report		12/93	Overall Project Objective: To produce guidelines outlining the requirements and procedures for monitoring of natural and recharged beaches. Current Status: Extra work identified 12/93 which will delay the production of the Final Draft Report.	
Final Draft Report		4/94		
Final Report		5/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Beach Management Manual - Phase 2

Proposal Number: C6(92)02

NRA Project Manager: Mike Owen (Consultant)

Project Number: 0446

Function: FD

Budget:	199_2/3	199_3/4	199_4/5
	(10) Ph 1	32	50

199_5/6	199_
20	

Project Size: Medium

Start Date: 9/93 (Phase 2)

End Date: 9/95 (Phase 2)

New End Date:

Contractor: CIRIA

Reporting Relationships:

Project Board:

Lindsay Pickles
Robert Runcie
Mike Owen (NRA representative on CIRIA panel)

Project Support Group:

R&D Section

Quality Review Panel:

Lindsay Pickles - Flood Defence Commissioner
Mike Owen - Topic Advisor
Geoff Brighty - Anglian Region R&D Coordinator
Keith Slaney - Northumbria/Yorkshire
David Pilkington - South Western
Andrew Fraser - North West
Peter Barham - Anglian

FD Managers Group

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
First Draft Final Report		3/95	Overall Project Objective: To produce a practical manual incorporating current best practice and new research findings, to direct engineers on planning, design, implementation and management of beaches and beach recharge schemes. Current Status: On target Contribution to CIRIA collaboratively funded project. NRA contributes to Project Management through representation on Steering Committee. Robert Runcie corresponding member on CIRIA project groups.	
Second Draft Final Report		6/95		
CIRIA Report		TBA		
R&D Project Record		9/95		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Effectiveness of Beach Control Operations

Proposal Number: C6(92)14

NRA Project Manager: Mike Owen (Consultant)

Project Number: 0447

Function: FD

Budget:	199_2/3	199_3/4	199_____
	12	8	

199_____	199_____

Project Size: Small

Start Date: 2/93

End Date: 9/93

New End Date: 4/94

Contractor: HR Walingford

Reporting Relationships:

Budget Manager:

Robert Runcie

Project Support Group:

HR Wallingford
R&D Section

Quality Review Panel:

Lindsay Pickles - Flood Defence Commissioner
Mike Owen - Topic Advisor
Geoff Brighty - Anglian Region R&D Coordinator
Keith Slaney - Northumbria/Yorkshire
David Pilkington - South Western
Andrew Fraser - North West
Peter Barham - Anglian

Outputs:	Type:	Due:	Comments:	Date: 30 March 1994
Draft Final Report		1/94	Overall Project Objective: To assess available information on the effectiveness of different beach control operations, and to examine the potential for field trials of sub-surface drainage and other methods, and present it in the required format of the Beach Management Manual. Current Status: Draft report was reviewed and accepted by QRP. Contractor making final changes to report prior to publication of final report.	
Final Report		4/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Rehabilitation of Coastal Structures - Phase 2

Proposal Number: C6(92)17

NRA Project Manager: Harry Lunt

Project Number: 0481

Function: FD

Budget:

199_3/4	199____	199____
7		

Reporting Relationships:

Budget Manager:

R Runcie

Project Support Group:

Ian Stickland (Consultant)
Ann Brennan (HO R&D)
R&D Section

Project Size: small

Quality Review Panel:

Lindsay Pickles - Flood Defence Commissioner
Mike Owen - Topic Advisor
Geoff Brighty - Anglian Region R&D Coordinator
Keith Slaney - Northumbria/Yorkshire
David Pilkington - South Western
Andrew Fraser - North West
Peter Barham - Anglian

Start Date: 3/93

End Date: 1/94

New End Date: 4/94

Contractor: Ian Stickland

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Draft Final Report		10/93	Overall Project Objective: To produce guidelines for the refurbishment of existing NRA coastal structures Current Status: Draft Final Report reviewed and final version produced for Robert Runcie to check as Topic Leader. Expected that 50 R&D Project Records (as interim manuals) will be produced April 1994. Final version will be incorporated by FD in National FD Manual.	
Draft Final Report (prior to conversion to Manual format by FD)		1/94		
Final Report		4/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title:

Beach Recharge Material Demand, Resources and Availability

Proposal Number:

C6(92)16

NRA Project Manager:

C Birks

Project Number:

0489

Function:

HO FD

Budget:

199_3/4	199_4/5	199_5/6
20	20	10

199____	199____

Project Size:

small

Start Date:

9/93

End Date:

9/95

New End Date:

Contractor:

CIRIA

Reporting Relationships:

Budget Manager:

R Runcie

Project Support Group:

R&D Section

Quality Review Panel:

Lindsay Pickles - Flood Defence Commissioner
Mike Owen - Topic Advisor
Geoff Brighty - Anglian Region R&D Coordinator
Keith Slaney - Northumbria/Yorkshire
David Pilkington - South Western
Andrew Fraser - North West
Peter Barham - Anglian

FD Managers Group

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Progress Report		12/93	Overall Project Objective: To provide information, examine procedures and make recommendations which will aim to ensure a long-term and adequate supply of suitable beach recharge materials, having regard to cost implications. Current Status: Contribution to CIRIA collaboratively funded project. NRA contributes to Project Management through representation on Steering Committee. Robert Runcie corresponding member on CIRIA project groups.	
Progress Report		3/94		
Progress Report		9/94		
Draft Final Report		4/95		
Final Report		6/95		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Identification of Estrogenic Substances in Sewage Treatment Effluents

Proposal Number: A7(93)01

NRA Project Manager: Geoff Brighty

Project Number: 0490

Function: WQ

Budget:	199_3/4	199_4/5	199_5/6
	36	94	69

199_	199_

Project Size: Medium

Start Date: 12/93

End Date: 3/96

New End Date:

Contractor: Brunel Uni/MAFF

Reporting Relationships:

Project Board:

G Morris
D Jordan
J Seager
M Pearson

Project Support Group:

R&D Section
G Morris
M Daniel (analysis)
D Tinsley
S Killeen

Quality Review Panel:

R&D Section
G Morris
M Daniel (analysis)
D Tinsley
S Killeen
D Jordan
J Seager

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Progress Report		2/94	Overall Project Objective: To identify and quantify the components present in sewage effluents that are responsible for the vitellogenic response in fish.	
Interim Progress Report		7/94		
Interim Progress Report		1/95		
Interim Progress Report		7/95		
Draft Final Report		12/95	Current Status: Agreement with Plc's has taken much effort to secure sampling. Development of sampling strategy completed. Initial screening assay development completed and "on-line". Initial fragmentation work is underway and samples are being passed to Brunel for analysis.	
Final Reports		3/96		
			Meeting on progress planned for 9 May 1994.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: National System for Groundwater Recharge Assessment

Proposal Number: B4(93)1

NRA Project Manager: David Burgess

Project Number: 0499

Function: WR

Budget:	199_3/4	199_4/5	199____
	27	52	

199____	199____

Project Size: small

Start Date: 1/94

End Date: 1/95

New End Date:

Contractor: I H

Reporting Relationships:

Budget Manager:

G Wilson

Project Support Group:

Mike Eggboro
R&D Section
A Skinner

Quality Review Panel:

R&D Section
A Skinner (National Groundwater Centre)
Richard Streeter
Mike Eggboro

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Interim Progress Report		5/94	Overall Project Objective: To develop an accurate, consistent and publicly defensible method of estimating mean annual groundwater recharge applicable to drift free areas of aquifer outcrop in England and Wales. Current Status: The contract is out for signature at present. Early work is being assessed in the progress report for May 1994.	
Draft Final Report		10/94		
Final Report		1/95		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

National R&D Project Resumé

April 1994

Produced by R&D Section

Title: Determination of Minimum Acceptable Flows

Proposal Number: B2(93)1

Project Number: 0520

NRA Project Manager: Andrew Baxendale

Function: Water Resources

Budget:	199_3/4	199_4/5	199_____
	11	14	

199_____	199_____

Project Size: small

Start Date: 2/94

End Date: 12/94

New End Date:

Contractor: Birmingham Univ

Reporting Relationships:

Budget Manager:

G Wilson

Project Support Group:

R&D Section
Richard Buxton, Independent Expert
M Owen
R Streeter

Quality Review Panel:

R Streeter
M Owen
B2 Topic Group
Water Resources Managers
R&D Section

Outputs:	Type:	Due:	Comments:	Date: 11 April 1994
Interim Report		5/94	Overall Project Objective: To develop the concept of Minimum Acceptable Flows (MAF) and a policy for their application. Current Status: Project recently started. Running to targets, financially and technically. Links to National R&D Projects 405 and 282.	
Draft Final Report		8/94		
Final Reports		12/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigations

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Evaluation of River Sediments for Methyl Mercury

Proposal Number:

n/a

NRA Project Manager:

G Phillips

Project Number:

OI 420

Function:

Water Quality

Budget:

199_2/3_	199_3/4	199_4/5
31,135	49,063	49,063

199_5/6	199_
24,399	

Project Size:

Medium

Start Date:

08/92

End Date:

09/95

New End Date:

Contractor:

Imperial College

Reporting Relationships:

Project Board:

D King
D Taylor
M Pearson

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section
D King
D Taylor
J Wortley
Alistair Ferguson (TAPS)

Outputs:	Type:	Due:	Comments:	Date: 17/3/94
Interim Progress Report		30/4/93	Overall Project Objective: To determine the causal effects of the reduction of methyl mercury in the River Yare and comment on the effects of dredging and provide recommendations for further study and monitoring.	
Interim Progress Report		31/3/94		
Interim Progress Report		28/2/95		
Annual Report		31/10/93	Current Status: On target. Some liaison with Broads Authority. Project 420 started in the 1980's and initially reported in 1992 on the extent of the mercury pollution in the River Yare and associated Broads.	
Annual Report		31/10/94		
Draft Final Report		30/9/95	This current phase of work is to evaluate the removal of sediments by dredging for navigation, monitor for the extent of mercury pollution, and assess the fate in the foodchain.	
Final Report		After Review		
Summary Report		After Review		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Coastal Wildlife Database - Phase 1

Proposal Number:

n/a

NRA Project Manager:

Claire Redmond

Project Number:

OI 500

Function:

RCN

Budget:

199_0/1	199_1/2	199_2/3
63	80	69

199_3/4	199_4/5
48	5

Project Size:

Large

Start Date:

Phase 1 04/89

End Date:

Phase 1 07/94

New End Date:

Contractor:

Various

Reporting Relationships:

Project Board:

P Barham
R Runcie

Project Support Group:

R&D Section
G Murphy
P Dowey

Quality Review Panel:

R&D Section
G Murphy
P Barham

Outputs:	Type:	Due:	Comments:	Date: 17/3/94
<ol style="list-style-type: none"> 1. Estuary Study of Crouch, Roach and Blackwater 2. Desk Study of the available information in the Wash, Lincolnshire, and Norfolk 3. Estuary Study of the River Blythe 4. Estuary Study of the River Humber 5. Estuary Study of the River Colne 6. Study of the Salcott Channel 7. Study of Hamford Water 8. Estuary Study of the River Stour 9. Study of the Lincolnshire Coast 10. Estuary Study of the Deben River 11. Estuary Study of the River Orwell 			<p>Overall Project Objective: To provide a wildlife database for the East Anglian coastline in order to help in the assessment of flood defence schemes and other works and determine their impact.</p> <p>Current Status: On target.</p> <p>Data collation to end 1993/1994 on completion of the survey contracts in Mersea Island, Dengie Flats, Alde Estuary, Butley Estuary, Ore Estuary, Breydon Water, Desk study of the soft sea defences in Norfolk and Suffolk.</p> <p>Phase 2, to determine the use of IS for the Coastal Wildlife Database, is due to start in 1994/1995. A scoping study is currently underway.</p>	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé April 1994

Produced by R&D Section

Title: Coastal Wildlife Database - Phase 2

Proposal Number:

n/a

NRA Project Manager:

Claire Redmond

Project Number:

OI 500

Function:

RCN

Budget:

199_4/5

199_5/6

199____

45

TBC

199____

199____

Project Size:

Medium

Start Date:

04/94

End Date:

TBC

New End Date:

Contractor:

TBA

Reporting Relationships:

Project Board:

P Barham
R Runcie

Project Support Group:

R&D Section
P Dowey
G Murphy

Quality Review Panel:

R&D Section
P Dowie
G Murphy

Outputs:

Type:

Due:

Comments:

Date: 17/3/94

TBC

Overall Project Objective: To develop a GIS-type operating system for managing and presenting the data from Phase 1 of this project.

Current Status: Due to start 94/95.

The project, using recommendations from a consultants report on "Data Scoping and Assessment Study", will develop an appropriate IS framework and operating system for the management and presentation of the Coastal Wildlife Data information.

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

R&D Anglian Region - E:\documents\pub-ovr.htm

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Fish Habitat Replacement

Proposal Number:

n/a

NRA Project Manager:

Jonathan Wortley

Project Number:

OI 519

Function:

F

Budget:

199_0/1	199_1/2	199_2/3
23.2	25	0

199_3/4	199_4/5
1.7	0

Reporting Relationships:

Budget Manager:

A Wood

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section

J Wortley

G Phillips

A Wood

Project Size:

Small

Start Date:

09/89

End Date:

09/92

New End Date:

08/94

Contractor:

Leicester University

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Research paper OI/519/1/A (presented to a conference in Sweden)		11/91	Overall Project Objective: To review the data and make recommendations on the installation of fishery habitat improvement devices.	
Draft Habitat Manual		11/93	Current Status:	
PhD Final Report		target 8/94	PhD being written by student at Leicester University.	
			Thesis to be submitted 30 April 1994.	
			Interim outputs were produced during the life of the project but the final PhD, containing data on invertebrate colonisation, is still being written. The final output is due in August 1994, two years after the initial date.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: In-River Needs Assessment: Validation and Application

Proposal Number:

n/a

NRA Project Manager:

Peter Barham

Project Number:

OI 526

Function:

RCN

Budget:

199_3/4	199_4/5	199_____
13.5	8	

199_____	199_____

Project Size:

Small

Start Date:

02/94

End Date:

02/95

New End Date:

Contractor:

Birmingham Univ

Reporting Relationships:

Budget Manager:

M Child

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section

D Evans

P Sones

Outputs:	Type:	Due:	Comments:	Date: 7 April 1994
Interim Report		06/94	Overall Project Objective: To demonstrate the transferability of the assessment method developed under the first phase for the River Wissey and develop improved relationships to assess the sensitivity of species to hydrological stress. Current Status: Project on target.	
Interim Report		10/94		
Draft Final Report		12/94		
Final Report		2/95		
Manual		After Review		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Tree Management and Landscape Criteria - Great Ouse Catchment

Proposal Number:

n/a

NRA Project Manager:

Peter Barham

Project Number:

OI 527

Function:

RCN

Budget:

199_0/1	199_1/2	199_2/3
17.5	17	0

Reporting Relationships:

Budget Manager:

M Child

Project Support Group:

R&D Section

Central Area FRCN Section

Quality Review Panel:

R&D Section

Project Size:

Small

Start Date:

04/90

End Date:

03/92

New End Date:

04/94

Contractor:

Leicester University

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
First Draft Final Report		7/93	Overall Project Objective: To identify the status of trees in the riverine landscape of the Great Ouse Catchment and make recommendations on how they can be managed and improved. Current Status: Draft Final Report reviewed and returned to Contractor for minor changes and additions of recommendations (2/94). Final Report to be disseminated throughout Region when delivered. Recommendations for a wider National research project are being developed, based on this Anglian OI.	
Second Draft Final Report		12/93		
Final Report		4/94		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Environmental Effects of Ferric Dosing at Rutland Water

Proposal Number:

n/a

NRA Project Manager:

Bill Brierley

Project Number:

OI 534

Function:

WQ

Budget:

199_0/1	199_1/2	199_2/3
2	2	2

199_3/4	199_4/5
0	0

Project Size:

Small

Start Date:

10/90

End Date:

9/93

New End Date:

5/94

Contractor:

Leicester University

Reporting Relationships:

Budget Manager:

Bill Forbes

Project Support Group:

R&D Section
A Ferguson

Quality Review Panel:

Anglian Eutrophication Steering Group
A Ferguson
R&D Section

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
First Annual Report			Overall Project Objective: To determine the effects of ferric dosing on the benthic invertebrate communities of Rutland Water.	
Second Annual Report		10/92		
PhD Final Report		5/94	Current Status: PhD work completed 9/93.	
Summary Report		6/94	Student nearly completed PhD write-up, to be submitted May 1994. Proposed short summary report to be submitted 6/94,	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Triazine Herbicides in Groundwater

Proposal Number:

n/a

NRA Project Manager:

Paul Hart

Project Number:

OI 538

Function:

WQ

Budget:

199_0/1	199_1/2	199_2/3
3	0	3

199_3/4	199_4/5
2.5	.5

Reporting Relationships:

Budget Manager:

M Pearson

Project Support Group:

R&D Section

D Burgess

Quality Review Panel:

R&D Section

D Tester

Project Size:

Small

Start Date:

10/91

End Date:

9/93

New End Date:

9/94

Contractor:

Birmingham
University

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report			Overall Project Objective: To determine the behaviour of the triazine herbicides within the Chalk Aquifer.	
Interim Report				
Final Report		9/94	Current Status: Work submitted for MPhil. Small retention held until PhD written.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Phosphorus in Broadland

Proposal Number:

n/a

NRA Project Manager:

Geoff Phillips

Project Number:

OI 540

Function:

WQ

Budget:

199_1/2

199_2/3

199_3/4

8.5

20.4

16.6

199_4/5

199_5/6

17

17

Project Size:

Small

Start Date:

09/91

End Date:

03/96

New End Date:

Contractor:

In House

Reporting Relationships:

Budget Manager:

D Taylor

Project Support Group:

R&D Section

A Ferguson

Quality Review Panel:

R&D Section

A Ferguson

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Progress Report		4/94	Overall Project Objective: To monitor the changes in phosphorus loading in the Broadlands and the long term effect which this has on the community composition of selected Broadlands. Current Status: In house work undertaken at the Haddiscoe Laboratory investigating the phosphorus dynamics and inputs into the Broadland rivers. Due to end 1995/1996.	
Interim Progress Report		4/95		
Draft Final Report		1/96		
Final Report		3/96		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Nurient Cycling in Rutland Water

Proposal Number:

n/a

Project Number:

OI 543

NRA Project Manager:

Bill Brierley

Function:

WQ

Budget:

199_1/2	199_2/3	199_3/4
20	20	20

199_4/5	199_
9	

Project Size:

Small

Start Date:

10/91

End Date:

9/94

New End Date:

3/95

Contractor:

Leicester University

Reporting Relationships:

Budget Manager:

Bill Forbes

Project Support Group:

R&D Section
A Ferguson

Quality Review Panel:

Anglian Region Eutrophication Steering Group
A Ferguson
R&D Section

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report			Overall Project Objective: To calculate nutrient budgets and look at the nutrient cycling within Rutland Water. Current Status: Research Assistnat are completing their research at present. Work is due to end in August 1994 and submission of the final reports (PhD) will be by March 1995. Summary reports are also due in March 1995.	
Final Report		3/95		
Summary Report		3/95		

Targets and Timescales for the medinum and large Projects, including Major Milestones, are given in the Gantt Chart on the revers side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Effects of Ferric Dosing on Invertebrates at Rutland Water

Proposal Number:

n/a

NRA Project Manager:

Bill Brierley

Project Number:

OI 544

Function:

WQ

Budget:

199_1/2	199_2/3	199_3/4
20	20	20

Reporting Relationships:

Budget Manager:

Bill Forbes

Project Support Group:

R&D Section
A Ferguson

Project Size:

Small

Start Date:

10/91

End Date:

9/94

New End Date:

3/95

Quality Review Panel:

Anglian Region Eutrophication Steering Group
A Ferguson
R&D Section

Contractor:

Leicester University

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report			Overall Project Objective: To investigate the environmental effects of ferric dosing on lowland reservoirs in Northern Area.	
Final Report		3/95		
Summary Report		3/95	Current Status: Research Assistnat are completing their research at present. Work is due to end in August 1994 and submission of the final reports (PhD) will be by March 1995. Summary reports are also due in March 1995.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Carbon Cycling in Rutland Water

Proposal Number:

n/a

NRA Project Manager:

Bill Brierley

Project Number:

OI 545

Function:

WQ

Budget:

199_1/2	199_2/3	199_3/4
20	20	20

199_4/5	199_
9	

Project Size:

Small

Start Date:

10/91

End Date:

9/94

New End Date:

3/95

Contractor:

Leicester University

Reporting Relationships:

Budget Manager:

Bill Forbes

Project Support Group:

R&D Section
A Ferguson

Quality Review Panel:

Anglian Region Eutrophication Steering Group
A Ferguson
R&D Section

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report			Overall Project Objective: To calculate carbon budgets for Rutland Water and quantify the proportions of particulate organic carbon in the biota in order to produce a basic carbon model.	
Final Report		3/95		
Summary Report		3/95	Current Status: Research Assistnat are completing their research at present. Work is due to end in August 1994 and submission of the final reports (PhD) will be by March 1995. Summary reports are also due in March 1995.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Remote Sensing of Land Use Change

Proposal Number:

n/a

NRA Project Manager:

Nigel Fawthrop

Project Number:

OI 547

Function:

WR

Budget:

199_1/2	199_2/3	199_3/4
5	4	0

199_4/5	199_
1	

Project Size:

Small

Start Date:

7/91

End Date:

3/95

New End Date:

Contractor:

Cambridge University

Reporting Relationships:

Budget Manager:

G Wilson

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report: "A remotely-sensed database for monitoring land use change in the River Glen catchment"		5/92	Overall Project Objective: To develop a methodology for determining land-use changes using remote sensing technologies.	
Draft Final Report (First)		2/94	Current Status: Work has been undertaken by project team to analyse land of the River Glen Catchment over time using historical records and remote sensing techniques.	
Draft Final Report (Second)		12/94		
Final Report		3/95	First draft final report received and reviewed by NF and QRP.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Grafham Water Benthos Survey

Proposal Number:

n/a

NRA Project Manager:

Terry Clough

Project Number:

OI 553

Function:

WQ

Budget:

199_2/3

199_3/4

199_____

8.6

13.7

Reporting Relationships:

Budget Manager:

P Waldron

Project Support Group:

R&D Section

A Ferguson

Quality Review Panel:

R&D Section

Regional Eutrophication Group

A Ferguson

Project Size:

Small

Start Date:

4/92

End Date:

3/94

New End Date:

4/94

Contractor:

In House

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report			Overall Project Objective: To determine the impact of ferric sulphate dosing on the benthic invertebrates of Grafham Water and Foxcote Reservoir.	
Draft Final Report		4/94	<p>Current Status:</p> <p>The project has been monitoring the input of ferric sulphate dosing on invertebrate communities at Grafham Water, and subsequent recovery after dosing ceased.</p> <p>Draft final report due 4/94</p>	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Grafham Water Plankton Survey

Proposal Number:

n/a

NRA Project Manager:

Terry Clough

Project Number:

OI 554

Function:

WQ

Budget:

199_2/3

199_3/4

199_

13.5

0

199_

199_

Project Size:

Small

Start Date:

4/92

End Date:

3/93

New End Date:

4/94

Contractor:

In House

Reporting Relationships:

Budget Manager:

P Waldron

Project Support Group:

A Ferguson
R&D Section

Quality Review Panel:

A Ferguson
Regional Eutrophication Group
R&D Section

Outputs:

Type:

Due:

Comments:

Date: 18/3/94

Final Report

4/94

Overall Project Objective: To determine the impact of ferric sulphate dosing on the plankton of Grafham Water.

Current Status:

Insufficient budget in 93/94 to continue sampling this year.

Final Report being written.

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

R&D Anglian Region - 11/03/94/94-001

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: The Protection of East Anglian Wetlands

Proposal Number:

n/a

NRA Project Manager:

Geoff Mason

Project Number:

OI 558

Function:

WR

Budget:

199_2/3	199_3/4	199_4/5
9.348	19.65	39.041

Reporting Relationships:

Budget Manager:

G Wilson

Project Support Group:

R&D Section

D Burgess

C Redmond

Quality Review Panel:

D Burgess

C Redmond

Project Size:

Small

Start Date:

2/93

End Date:

7/94

New End Date:

Contractor:

B G S

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Progress Report		1/94	Overall Project Objective: To identify and evaluate methodologies for defining groundwater catchment areas to wetlands, the effect abstraction has on such wetlands and to consider and apply a methodology for allocating water resources within a defined groundwater catchment area for wetlands. Current Status: Project is phased: Phase 1 ending early 1994/1995. Phase 1 interim report to determine whether phase 2 progresses and, if so, what criteria it follows. Budget for phase 2 is £36,611 + inflation.	
Progress Report		5/93		
Progress Report		8/93		
Progress Report		11/93		
Progress Report		2/94		
Progress Report		5/94		
Draft Final Report		7/94		
Final Report		After Review		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Transport and Fate of MTBE in Groundwater

Proposal Number:

n/a

NRA Project Manager:

Paul Waldron

Project Number:

OI 562

Function:

WQ

Budget:

199_2/3	199_3/4	199_4/5
15	10	0.5

Reporting Relationships:

Budget Manager:

M Pearson

Project Support Group:

R&D Section
Glynn Hyett

Quality Review Panel:

Regionally:
Pollution Prevention Officers
D Tester

Nationally:
Head of Pollution Control

Project Size:

small

Start Date:

5/92

End Date:

6/94

New End Date:

Contractor:

UCL / In House

Outputs:	Type:	Due:	Comments:	Date: 12 April 1994
UCL: Draft Final Report Final Report (MSc Thesis)		9/93 12/93	Overall Project Objective: To establish the behaviour of MTBE in groundwater, especially the distances over which it may travel and the rate at which it degrades.	
NRA: Internal Summary Report (Draft) Final Summary Report		4/94 6/94	Current Status: An on-going site study was extended to include a wider investigation of the MTBE problem. A review and site investigation was contracted to UCL staff and supported by NRA staff. MSc thesis delivered to NRA by 12/93. Further investigation work continued by NRA staff will culminate in a short report, produced by Glynn Hyett, on the implications for the NRA. The draft report is now out for comment and the final report is due in June 1994	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Mesotrophic Rivers in Anglian Region - Phase 1 and 2

Proposal Number: n/a

NRA Project Manager: David Foster

Project Number: OI 564

Function: WQ

Budget:	199_2/3	199_3/4	199_4/5
	15	0	18.2

199____	199____

Project Size: Small

Start Date: 4/92

End Date: 3/95

New End Date:

Contractor: Various

Reporting Relationships:

Budget Manager:

M Pearson

Project Support Group:

A Ferguson
R&D Section

Quality Review Panel:

R&D Section
A Ferguson
Regional Eutrophication Steering Group
T Wam

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Phase 1 Report		5/93	Overall Project Objective: To identify the nature and extent of mesotrophic streams in the Anglian Region and develop protocols for their protection and monitoring of their management. Current Status: Phase 1 report completed - determined which rivers in the Anglian Region fall in to a mesotrophic category. Phase 2 will start 4/94 with sampling and analysis to assess the indicator communities and confirm assessments made in Phase 1.	
Phase 2 Report		3/95		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Toxicity of Iron to Trout

Proposal Number:

n/a

NRA Project Manager:

Geoff Brighty

Project Number:

OI 567

Function:

WQ

Budget:

199_2/3

199_3/4

199_

0.5

0.5

199_

199_

Project Size:

Small

Start Date:

10/92

End Date:

proposed 9/95

New End Date:

Contractor:

Nottingham Trent Uni

Reporting Relationships:

Budget Manager:

M Pearson

Project Support Group:

R&D Section

Bill Brierley

C Extence

A Ferguson

Quality Review Panel:

R&D Section

A Ferguson

Regional Eutrophication Group

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report		10/93	Overall Project Objective: To determine the toxic effects, if any, ferric dosing is having on trout.	
Interim Report		10/94		
			Current Status: The NRA has contributed to this NERC PhD research investigation, dependent on the progress to date.	
			Contribution in 1994/1995 will be assessed in November 1994	
			Project has complimented OI's 534 and 544 with information on effects of iron to fish and certain aspects have been very important to clarifying inputs of ferric dosing to Rutland Water.	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: The Effects of Goose Grazing on the Norfolk Broads - Flood Defence Implications

Proposal Number:

n/a

NRA Project Manager:

Claire Redmond

Project Number:

OI 568

Function:

RCN

Budget:

199_3/4

199_____

199_____

2.75

199_____

199_____

Project Size:

Small

Start Date:

04/93

End Date:

04/94

New End Date:

Contractor:

R S P B

Reporting Relationships:

Budget Manager:

P Barham

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section

P Barham

G Phillips

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Final Report		04/94	<p>Overall Project Objective: To determine the implications which bird grazing, in particular goose grazing, has on the reed communities of the Broads and to assess the implications for flood defence.</p> <p>Current Status: Final report is expected soon</p>	

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Wave Attenuation over Saltmarshes

Proposal Number:

n/a

NRA Project Manager:

Daniel Leggett

Project Number:

OI 569

Function:

FD

Budget:

199_3/4	199_4/5	199_5/6
1	1	1

199_	199_

Project Size:

Small

Start Date:

10/93

End Date:

9/96

New End Date:

Contractor:

Cambridge University

Reporting Relationships:

Budget Manager:

R Runcie

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section

M Dixon

S Jeavons

C Redmond

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report (inception)		1/94	Overall Project Objective: To determine the flood defence implications of wave attenuation by saltmarshes and develop appropriate generic or empirical models. Current Status: Project started 10/94. Final Interim Report on circulation.	
Interim Report (literature and methodology)		8/94		
Interim Report (field measurement)		8/95		
Final Report		7/96		
Programmes, Models, Data		9/96		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Restoration of the Norfolk Broads (LIFE Fund Project)

Proposal Number:

n/a

NRA Project Manager:

Geoff Phillips

Project Number:

OI 570

Broads Authority:

Jane Madgewick

Budget:

199_3/4	199_4/5	199_5/6
32	34	34

Reporting Relationships:

Project Board:

J Seager
P Raven
C Mills
M Pearson

Project Support Group:

R&D Section
J Wortley
E Lammens (RIZA)

Quality Review Panel:

A Ferguson
Regional Eutrophication Group
ECOTEC
Broads Research Advisory Panel
M Bramley (Head Office)

Project Size:

Medium

Start Date:

4/93

End Date:

3/96

New End Date:

Contractor:

NRA/Broads Auth.

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Year 1 Report		4/94	Overall Project Objective: To establish the most effective way of overcoming the internal stabilising mechanisms that currently prevent the successful restoration of shallow lakes with special emphasis on the Norfolk Broads. Current Status: Co-funded with National R&D Programme, Broads Authority, English Nature, Soap and Detergent Industry Association, EC Life Fund Total Budget = £ 712,000 Region Budget = £ 100,000 with further £ 65,000 from Head Office End of Year 1: Report due	
Year 2 Report		4/95		
Final Report		4/96		
Final "Glossy" Report on Biomanipulation		9/96		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

R&D Anglia Region - E:\documents\pub-ov-22a

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Switch Mechanisms Between Alternative Stable States in Freshwater Communities

Proposal Number:

n/a

NRA Project Manager:

Geoff Phillips

Project Number:

OI 572

Function:

WQ

Budget:

199_3/4	199_4/5	199_5/6
1	1	1

199_	199_

Project Size:

Small

Start Date:

10/93

End Date:

9/96

New End Date:

Contractor:

Liverpool University

Reporting Relationships:

Budget Manager:

D Taylor

Project Support Group:

R&D Section

Quality Review Panel:

R&D Section

A Ferguson

Regional Eutrophication Group

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Interim Report		4/94	Overall Project Objective: To determine the mechanisms which control the switching in lakes from non-eutrophic to eutrophic communities, with particular reference to the role of macrophytes in controlling nutrient availability.	
Interim Report		10/94		
Interim Report		4/95		
Interim Report		10/95		
Final PhD Thesis		4/96	Current Status: Project due to report on initial review of subject area and work plans for 94/95 field season.	
Summary Report		10/96		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.

Operational Investigation Project Resumé

April 1994

Produced by R&D Section

Title: Status and Effect of *Anguillicola crassus* on Eel Populations

Proposal Number:

n/a

NRA Project Manager:

Angus Scott

Project Number:

OI 575

Function:

Budget:

199_3/4	199_4/5	199____
int. 1	int. 2	

199____	199____

Reporting Relationships:

Budget Manager:

A Wood

Project Support Group:

R&D Section
Brampton Fisheries Laboratory

Quality Review Panel:

R&D Section
A Wood
Brampton Fisheries Laboratory

Project Size:

Small

Start Date:

10/93

End Date:

3/95

New End Date:

Contractor:

In House

Outputs:	Type:	Due:	Comments:	Date: 18/3/94
Draft Final Report		12/94	Overall Project Objective: To determine the extent of the distribution of <i>A. Crassus</i> in the eel fishery in East Anglia and the effect this is having on stocks and the value of this fishery. Current Status: No cost to OI Programme. Project being managed by Brampton Fisheries Laboratory as an internal project. The final output will be reported through the OI Programme to ensure National link of this research to the National R&D Programme.	
Final Report		3/95		

Targets and Timescales for the medium and large Projects, including Major Milestones, are given in the Gantt Chart on the reverse side of this document.

Further information is available from the R&D Section.