



the River Restoration Centre

Working to restore and enhance our rivers

Annual Report April 2018 to March 2019

The River Restoration Centre actively promotes the re-establishment of natural processes, features, habitats and biodiversity of a river system.

We support others to achieve this by collating information, deriving knowledge and disseminating evidence to share best practice across the river and catchment management community.

2018/19 Overview

Brexit continues to dominate all discussions and decisions (or lack of), especially within the environment sector. The Government's 25 Year Plan for the Environment has much to be applauded, but as usual there is a long way to go with adding the sort of detail which will be required to make the plan a long term success. Until discussions with the EU are concluded it is likely that funding for the Water Environment improvements will be ad hoc and short term.

RRC contributed to the process of review of the Water Framework Directive and its daughter directives, including the Floods Directive, through our participation in the ECRR network of national river restoration centres. This response was drawn from the successes, issues and suggestions for improvement to implementation from across Europe's practitioners. It is clear that some issues exist across many countries (e.g. river discontinuity (barriers), whilst many implementation programmes are at very different stages (development through to delivery). The UK sits firmly in the 'delivery' group.

Within RRC, the team remains the same size as last year, but with a push now to expand to add capacity to meet the need for more training and project involvement, including recruitment for our new 'MICS' EU Horizon 2020 funded post on citizen science (a three year project from Jan 2019).

Finally congratulations to Chiara on successfully completing her PhD with Cranfield University and RRC.

RRC Staff

Managing Director	Martin Janes
Accounts Technician	Jackie O'Regan
Science & Technical Manager	Marc Naura
Restoration Adviser	Joshua Robins
Centre Administrator	Nicola Mackley
Information Officer	Alexandra Bryden



RRC Board of Directors

RRC is governed by a Board of Directors selected from river management and governance backgrounds:

Fiona Bowles (Chairman)	Ann Skinner
Kevin Skinner (Secretary)	Phil Boon
Orlanda Harvey (Vice Chair)	Jo Cullis
Will Bond	Patrick Murphy
Christianne Tipping	David Adams

RRC at Cranfield

The River Restoration Centre is based at Cranfield University in Bedfordshire. We would like to thank Cranfield Water Science Institute and the School of Water, Energy and Environment at Cranfield University for their support of RRC.



RRC Membership

RRC continues to receive the support and financial commitment from the UK environment agencies and conservation bodies as Core Funders (logos below).

During the year there was a 19.1% increase in Membership support across our Business, Trust and Individual grades.

Corporate Members during the year were:

Ove Arup & Partners	JBA Consulting*
ATKINS	National Trust*
Cranfield University	Salix RW
Five Rivers*	South East Water
Jacobs*	

*New for 2018-19

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RRC Bulletin
June 2019 - Issue 92

RRC TRAINING COURSES & SITE VISITS

Date	Location	Course title	Booking
11th July	Ripton, East Devon	River Otter Beaver Trial Site Visit	Last few spaces left Email to book your place
16th October	New Forest	New Forest Wetlands Site Visit	Email to book your place
17th October	Warrington	Hydromorphology for River Restoration (Level 2)	Register interest
23rd October	Reading	Developing a Catchment-wide River Restoration Plan	Register interest
November TBC	Cranfield	Desktop Assessment	Register interest

[Find out more and book](#)

NRRI AND EU RIVERWIKI

We are currently in the process of updating the National River Restoration Inventory (NRRI) and EU RiverWiki, with projects nationwide, from the last year. We have asked the leading environmental authorities in the UK to provide us with project information to add to this database of projects. If you have any new projects you would like to add, please upload the information as a case study on the RiverWiki or get in touch with us for advice on adding or updating your project information.

[Find out more](#)

NEWS & EVENTS

To celebrate **London Climate Action Week** from Monday July 1st, the **Catchment Based Approach** are running Integrated Catchment Delivery visits and practical workshops. CaBA aim to connect urban and rural communities across the Thames catchments, with positive action on climate adaptation and resilience. Events from Upper Thames to London with themes including restoring rivers, natural flood management, healthy soils and water resources.

[Find out more](#)

Do you know anything about solar powered water pumps? Any information on effectiveness, makes and costs would be appreciated. Please contact RRC or [Eden Rivers Trust](#). Thank you in advance for sharing your knowledge

Natural Resources Wales 'Challenges and Choices Consultation 2019'

Advertise your job opportunities and find exciting roles on our recently launched dedicated [Job Adverts](#) webpage

[More news and events](#)

We would like to thank **Cranfield University** and our core funders for their continued support

Environment Agency, Cyfoeth Naturiol Cymru, NIEA, Infrastructure, SEPA, Scottish Natural Heritage

For questions, feedback or to remove your name from our mailing list, [email](#) or call us 01234 752979.

Conservation Trust, SEPA, NRW, Freshwater Biological Association, Chilterns Area of Outstanding Natural Beauty, cbec, Atkins, Amenity Water Management, and Wessex Chalk Stream and Rivers Trust have been included.

The Bulletin has also been a great way to publicise RRC news and events, particularly the Annual Conference, Training Courses, Member Site Visits, and upcoming Integrated Catchment Delivery events.

Last summer we put out a survey to see how readers wanted the bulletin to look and what information they would benefit from. We decided to change the layout and style of the Bulletin starting from the September issue to make it less cluttered and easier to follow. This meant sectioning the document into 3 main topics to target upcoming events or a particular news article or RRC webpage. This also meant removing the side bar of news and information, so does limit the amount of information shared directly in the document, however there is always a link through to news and events on the RRC website.

RRC web pages such as the Advice page, UK River Prize, River Champions updates and NRRI factsheets have also featured in the bulletin, as well as EA NFM Roadshow outputs, and Integrated Catchment Delivery events.

RRC web-based resources

The number of visitors to the RRC website has remained stable over the last year with a slight decrease from the end of 2018.



The unique visitors in the 2018/2019 financial year fluctuated although the overall pattern of visitors remained the same as 2017/18, with the exception of September where numbers dropped to the lowest number of unique visitors since 2016. There was a 10% decrease in unique visitors and 1% decrease in total visitors. This is not necessarily a negative thing as it shows that RRC is reaching its target audience through different communication channels such as the Bulletin, social media including Twitter, Facebook, LinkedIn and YouTube, and communicating with individuals through enquiries.

- The AMBER Barrier Tracker App in May;
- The NFM Network Scotland in June;
- World Fish Migration Day 2018;
- Journal article in the Journal of Environmental Management on overcoming the division between implementing FRM and river restoration in July;
- Natural Capital reports from the Valuing Nature Programme from CEH in September;
- CIRIA's Culvert, Outfall & Screen Manual in September;
- NERC's video on working with nature to reduce flood risk in November;
- The Tweed Forum Eddleston Water Project video in January;
- The Engineering with Nature publication from EA, USAC;
- And Rijkswaterstaat in the Netherlands, in January.

We have publicised a number of PhD opportunities from Universities such as Southampton, Leeds, Coventry and Queen Mary University of London.

Events such as finding out more about NFM in the North East, World Fish Migration Day, Wild Trout Trust Conservation Awards, and the Rivers Trust Autumn Conference have been featured.

News and job opportunities from Environment Agency, Wiltshire Wildlife Trust, Natural England, Leicester City Council, Thames21, University of Oxford, River Theme

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We are continuing to develop the site as an essential resource for everyone involved in river management. The news and events pages are continually updated, and we are constantly seeking different authors to produce guest pieces for our blogs page. Page layouts and content are routinely revised such as the advice page and the Integrated Catchment Delivery events on the Community Engagement webpage.

Communication, events and media

Complementing the website and bulletin, we actively promote new developments, key activities and best practice

We have attended events, conferences and international meetings including:

- Scottish Government hosted Eddleston Science Day, Edinburgh – April,
- CIEEM Autumn Conference, Glasgow, Scotland – February,
- ECRR General Members Meeting, Wageningen, NL – November,
- CIEEM Conference, Athlone, Ireland – February.

Through our social media routes:

- RRC now has over 4,160 followers on Twitter, an increase of 478 over the year. Monthly average of 9 tweets (down from 12 in 2017-2018), and 37 new followers a month.
- An increase from 1,171 to 1,304 'likes' on Facebook. Posts with articles and news on river restoration techniques and recent publications are popular on Facebook, including dam removal, TV and radio news, and news articles, with the highest rated reaching over 7,000 users.
- There are 958 followers of the RRC LinkedIn profile, an increase from 859 last year, which is approximately 8 new followers per month on average this year.
- RRC's Flickr account is being continually updated with photos from RRC events including training courses, site visits and the Annual Network Conference, making this a useful resource for up to date river restoration images that our members can use.

Local Engagement & Communications work

RRC continued to run the *River Champions* Award in 2018. *River Champions* aims to celebrate the outstanding efforts of individuals contributing to river restoration in their area. It aims to recognise those dedicating time outside of their day-to-day roles to contribute toward improving rivers for wildlife and people.

Eight individuals were recognised as River Champions at the 2018 UK River Prize Awards Dinner. Three of

which attended the UK River Prize Awards Dinner to receive their Certificate and year's Membership of the RRC. Each River Champion has been recognised on RRC's website, Bulletin and Social Media throughout the year.

Science and Research

We have continued to work on ongoing and new research projects such as:

- IUCN river restoration and biodiversity evidence (SNH lead),
- MICS project on measuring citizen science impact (Earthwatch lead),
- Urban flood resilience project (Nottingham University lead).

RRC participated in the development of a number of research proposals:

- Cardiff University Leverhume application 'the impacts of contaminants in fine sediments on ecosystems',
- Reading University H2020 bid 'collaborative methodologies and tools to implement nature based solutions in riverine urban communities'
- EAWAG (Switzerland) proposal 'Identifying and addressing the physical controls and ecological consequences of riverine sedimentation'
- EU Consortium bid for doctoral training for water management and engineering.

RRC staff continue to deliver a series of annual lectures and presentations at Cranfield and Birmingham universities and at conferences. We participated in and chaired sessions at the international IS Rivers 4-day conference in Lyon, France. RRC supported external workshops on confounding factors impacts on biology, Seminar on intermittent streams (University of Nottingham) and a workshop on headwater streams (CEFAS).

And we contributed to a journal paper on 'the use of large wood in river restoration' using the NRR (Water and Environment Journal).

Technical Advice and Assessment

Strategic steering and working groups

RRC is respected for its impartial and independent expert advice. We continue to provide significant input at the EU/UK/national strategic level:

- UK River Prize lead partner/administrator - UK
- CaBA Catchment Data User Group - England
- NRW River Restoration Group - Wales

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- Natural Flood Management steering group – Scotland
- IUCN river restoration review steering group – UK/RoI
- SSSI river restoration programme board - England
- European Centre for River Restoration board - Europe

These roles allow us to inform, influence and support national and international policy, strategies & initiatives.

We were pleased to be able to support an €8m LIFE bid from NRW for restoration of the English/Welsh River Dee, from an outline to the final stage proposal.

Back Burn Catchment Assessment

RRC worked with The Environment Partnership (TEP) to help Fife District Council and SEPA to develop a catchment plan based on an assessment of pressures and impacts. This was based on RRC's catchment planning framework which allows the prioritisation of measures and options based on the issues within the catchment.



RRC undertook a desktop assessment and walkover survey, which included an RHS and the capture of 360 photos. Hydromorphological pressures, constraints and options were recorded and then analysed. This information was combined to suggest which options should be prioritised to make catchment scale improvements. We also adapted the framework to include an assessment of options for achieving GEP.

Beltie Burn - Site and options assessment



RRC was asked to advise on potential river restoration options on the Beltie Burn prior to spruce forest

planting on the existing floodplain. The river is heavily modified and the landowners were interested in improving its hydromorphological and ecological quality. RRC was asked to suggest enhancement opportunities for two separate river sections. A site and desktop assessments were carried out in July 2018. The results and recommendations were presented in a report.

Deddington Brook - Options assessment

Berks, Bucks & Oxon Wildlife Trust asked RRC to investigate the potential for improving and enhancing biodiversity and habitat for wildlife on Deddington Brook.



We carried out a desktop study and field survey on 17km of the brook in order to identify the impacts on the catchment and suggest potential options for restoration to encourage repopulation of brown trout. The catchment planning methodology used in other reports was also applied to Deddington Brook.

St. John's Beck - Site and options assessment

RRC was asked to advise on potential river restoration options on a planned pipe crossing on Naddle Beck. The plan was to dig an 8m wide trench 2.4 m deep to bury 2 pipes underneath the river bed. As part of the work, the river bed and bank along a 20m section of the beck were likely to be disturbed and need re-instating. The site contractor requested that RRC suggest restoration options for the river section and the beck. A quick site and desktop assessments were carried out and the results and a series of recommendations are presented thereafter.

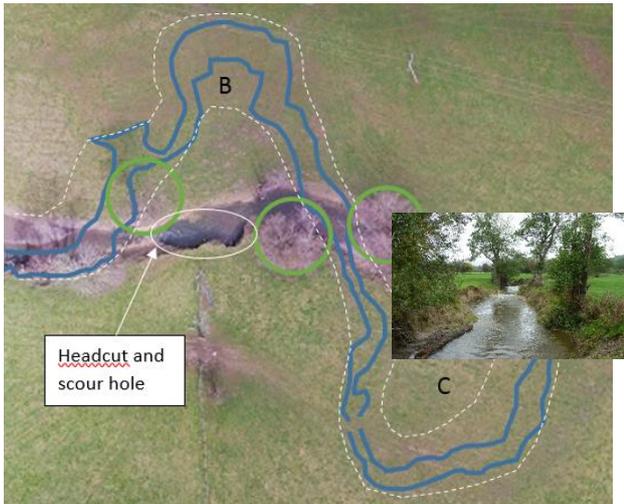
Gilwern Brook Impact Assessment

In the summer of 2016 unconsented works were carried out on the Gilwern Brook over a distance of approx. 500m.



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This site visit and report identified the impact of those works and the mitigation or restoration work that might be required to address that impact.



Wince Brook Catchment Assessment

The catchment planning methodology was also applied to the Wince Brook Catchment in Manchester for Natural Course. This followed on from the work done in the River Irk Catchment in the previous year. We analysed the pressures and impacts within the catchment to produce a prioritisation table that the partners can use to develop their catchment strategy.

Details	Reach	Reach pressure	ID	Measure	Top Impact		Benefits to water body impacts (0 low to 3 high)				
					Water quality	Poor geomorphic processes and forms	Poor habitat quality	Connectivity	Poor riparian habitats	Poor floodplain habitats	
	Urban land use	11a	11a	No feasible options to remove land use	1	1	0	0	2	3	
	Re-alignment	11a	11a	No feasible options to re-align river	0	3	2	1	1	1	
	Re-sectioning	11	11	Investigate passage	0	0	0	1	0	0	
	Bank protection	2	2	Remove unnecessary bank protection in Aberington Woodland	0	1	0	0	0	0	
	Bank protection	3	3	Create marginal habitats	0	0	1	0	1	0	
	Culvert at Kirkcaldy	4	4	Investigate culvert and retrofit baffles to aid passage if required	0	0	0	2	0	0	
	Bridges	5	5	Investigate other bridges to see if they are passable	0	0	0	1	0	0	
	Bridges	6	6	Reduce size of bridge in Aberington and open up channel	0	1	1	1	1	0	
	Outfalls	7	7	Survey and monitor outfalls to identify issues	1	0	0	0	0	0	
	Weirs in Aberington Woodland	8	8	Remove weir	0	1	0	2	0	0	
	Weirs in Aberington Woodland	9	9	Remove weir which has failed and become a deflector	0	1	0	0	0	0	

Training & Guidance

RRC 2018 Annual Network Conference

In April 2018 this two day conference titled “Engaging with Rivers” was held at the De Vere East Midlands Conference Centre with 354 delegates, 46 presentations, 5 workshops and 2 site visits. The conference was well supported with 20 sponsoring organisations providing highly sought after discounted places to smaller trusts, students and voluntary groups.

The feedback was excellent with 98% of attendees saying it met their expectations. This success represents the ongoing trend of increased numbers and interest from across the UK. We intend to review, improve and where necessary alter the event to maintain its position as the premier knowledge exchange platform for river restoration practitioners.

Thanks to our conference sponsors

OHES Environmental, APEM, Arup, Royal HaskoningDHV, Alaska, Thomson Ecology, Penny Anderson, Greenfix, Salix, Five Rivers, Jacobs (Ch2m), AWM, Ricardo, JBA, Frog, Kingcombe, Rootlock, Cartographer, Hydro-App and cbec eco-engineering.

2018 UK River Prize

The awards dinner was held in Nottingham with over 300 delegates attending, a significant increase on last year.



There were four finalists:

- Love Your River Telford, Shropshire
- Thame Valley Wetlands, Warwickshire & Staffordshire
- Connswater Community Greenway, Belfast
- Hills to Levels, Somerset



The overall winner was Hills to Levels, Somerset.

They were awarded the Nigel Holmes Trophy at the UK River Prize Awards Dinner, which was held during the 2018 RRC Conference.

Thanks to the Partners of the 2018 UK River Prize
Arup, South East Water, Severn Trent, Scottish Environment Protection Agency, Natural Resources Wales, Environment Agency and University of Dundee.

Site visits

Two site visits offered the opportunity for RRC members to view and discuss ongoing projects. This year the two projects were:

- River Ogwen Restoration Project, June 20th
- 2018 UK River Prize Winner Hills to Levels, Somerset, October 10th

Training courses

Introduction to Hydromorphology (Level 1) Belfast (May), Bristol (July), Perth (September), Inverness (February).

The course provided an introduction to hydromorphology for river restoration for practitioners. It combined presentations on hydrology and geomorphology with case study exercises and

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fieldwork. The events were attended by 75 participants from various organisations and charities.



Hydromorphology for River Restoration (Level 2) Birmingham (October), Bristol (March).

This course builds on the Introduction to Hydromorphology course and provide more in-depth knowledge of hydromorphological driver/process/form/pressure interaction and how they apply to river restoration. Delegates are introduced to detailed hydromorphological concepts such as river types, sediment transport and channel adjustment using evidence taken from the literature and interactive break-out sessions. Attendees are required to attend the Level 1 course or demonstrate a similar level of understanding.

River Habitat Survey Certification course Cardiff (March)

This 4-day RHS certification course adheres to the same standards as EA Accreditation. This year, we had 11 participants (15 max) from England, Wales and Slovenia representing environmental organisations (NRW), research and management institutes, consultancies, local authorities, catchment partnerships and trusts.

Mapping for Natural Flood Management – two combined one-day courses Cranfield (June)

These two courses teach delegates about mapping historic floodplain boundaries using the hydrogeomorphological method and mapping surface water runoff to assess storage and retention potential. They are delivered in collaboration with an experienced French geomorphologist, where this is commonly used. The courses attracted 17 participants from various organisations.

Developing a Catchment-wide River Restoration Plan Birmingham (November)

This is a new course developed on the back of RRC's advisory work over the last few years. It provides delegates with in an introduction to RRC's catchment planning framework. The framework is based on an assessment of pressures and impacts, which allows options to be prioritised based on how they will improve the catchment as a whole. There were 19 attendees and the feedback was very positive. We are

planning to run it again in the next financial year. There is also interest in helping participants to run the methods on their own catchments.

Guidance

The RRC's Manual of River Restoration Techniques has attracted EA funding, allowing an update for the England case examples. Last updated to 64 detailed case studies in 2013, the manual recorded a remarkable 73,400 case study downloads in 2018. This includes:

- adding more decision support to the online version, to steer users towards the best measures to consider,
- Updating 2013 entries,
- Updating the original Cole and Skerne entries
- Adding low cost Trust and community-led examples of river improvements.

Further complementary funding for updates for Scotland, Northern Ireland and Wales will be sought over the coming year.

Updates to the monitoring guidance (PRAGMO) and an online NRRI tool are also being planned.

Financial Summary

RRC has had another good financial year. Our turnover was £424k, up again from 2016, exceeding the financial targets set at the start of the year to produce surplus of £45k to reinvest to recruit additional staff.



We were pleased to welcome SEPA's NFM team in the Flood Risk Management function as Core funders this year, providing additional resource to be used in Scotland alongside the funds from the WFD 'WEF' team.

Northern Ireland's DAERA department doubled its RRC core funder support by incorporating matched funds from Fisheries as well as Environment. Similarly, NRW increased their funding of RRC by 50% to provide further support to area staff needing support and advice on ongoing river management and restoration issues.

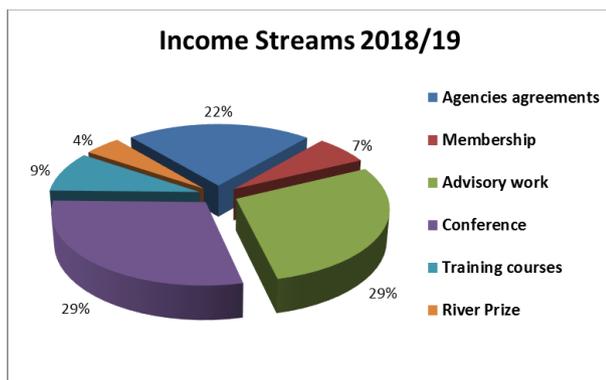
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Training courses, site visits and the annual conference all continue to be very well supported.

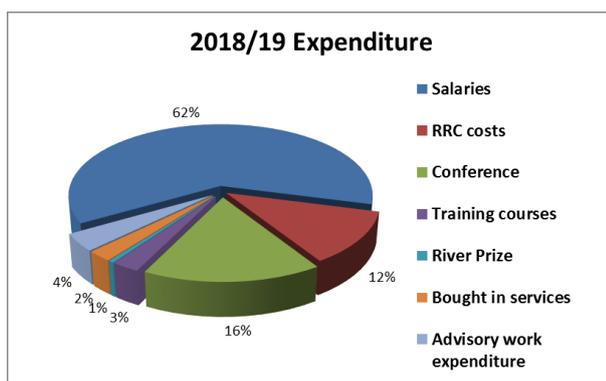
Income

RRC provides support and advice to its members. Income generated through statutory agency and conservation body agreements/grants, membership subscriptions and events all fund this activity. This helps to maintain the RRC as a permanent accessible resource for river managers and practitioners.



This year RRC helped over 25 projects with site visit and report-based independent technical and expert input. This generated £121,000 or 29% of RRC income, almost at the previous year's high level. The increasing attendance at the annual conference, UK River Prize and RRC training courses mean that they now account for 42% of income.

Costs



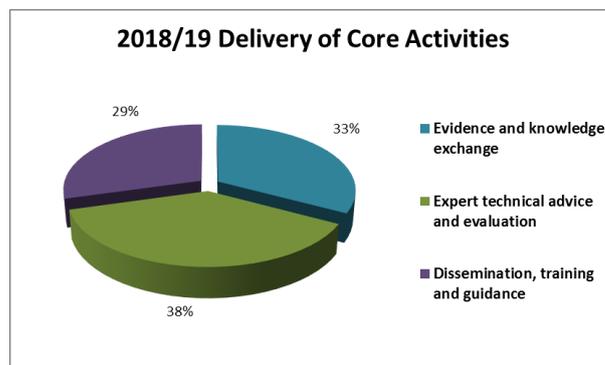
As an organisation RRC is very cost effective with 62% invested directly in the staff resource.

The significant costs involved in hosting the conference is included in the conference fee. This year is this figure is inflated by the venue's requirement that we had to take payment for accommodation – a straight 'money in, money out' transaction.

RRC core work areas

The core activities continue to be relatively evenly split across the three RRC business areas:

- Evidence and knowledge exchange;
- Expert technical advice & assessment;
- Training and guidance



Dissemination, training and guidance represents input into publications, the still very successful RRC conference, site visits, other RRC events and training courses together with the regular updates to the website, monthly bulletins and enhanced use of social media to inform our network.

Evidence and knowledge exchange combines the core role of RRC as an information and advice centre using its resources such as the NRRI and RiverWiki to ensure the UK has a central point of contact for evidence and best practice river restoration.

The expert technical advice and evaluation element emphasises the ongoing need for independent trusted advice offered by RRC staff and expert advisors.

These three core areas combine to enable RRC to continue to provide a broad range of outputs to support the needs of river managers, RRC subscribers, members and agencies. Across this range RRC is able to be proactive as well as respond to current needs and priorities.

Retained Income

As a responsibly governed not-for-profit organisation RRC maintains a provision representing approximately six months' operating costs, to ensure financial stability for growth and to maintain cash flow.

Martin Janes
Managing Director
March 2019

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