



CENTRE FOR DOCTORAL TRAINING (CDT) IN OIL & GAS

MANAGEMENT BOARD MEETING MINUTE

26th May, 2015, 10:00 a.m. – 12:45 p.m.

Postgraduate Centre, Room 2.02, Heriot-Watt University

ATTENDEES:

Management Committee Members

John Underhill (HWU; Chair, CDT Lead)	(JU)
Rob Butler (Aberdeen)	(RB)
Andy Aplin (Durham)	(AA)
Al Fraser (Imperial)	(AF)
Jonathan Redfern (Manchester)	(JR)
Gideon Henderson (Oxford)	(GH)
Keith Gerdes (Chair, Industry Advisory Board)	(KG)

INVITEES:

Anna Clark (HWU; CDT Training Academy Officer)	(AC)
Lorna Morrow (HWU; CDT Manager)	(LM)

1. Welcome and Apologies

JU welcomed everyone to the meeting and outlined the HSE provision.

Apologies had been received from Joe Cartwright (Oxford) and members welcomed Gideon Henderson as the University's representative for this meeting. Apologies had also been received from Bob Gatliff (BGS) and Vicki Norton (NERC) and neither organisation had been able to provide a deputy on this occasion.

2. Approval of Minute of the Management Committee meeting on 7th November, 2014 and review of actions

The minute had been circulated previously and amendments made in the light of members' comments and minute was therefore approved.

Update on Actions

(i) Data release: Liz Fellman (LF) confirmed that she had contacted Mark Thorley but had received no reply. Bob Gatliff (RG) confirmed in email dated 19/05/15 as follows, *'I had discussion with Malcolm Fleming and he knows the wide support for proper, free release of data. Not sure on timing of this report but will ask him'*.

Action: LM to follow up with LF/NERC and RG and item to be carried over to next meeting.

(ii) CDT Renewal: Email response dated 20/05/15 received from Vicki Norton, Senior Science Programme Officer (NERC) as follows, *'As for the broader question of renewal of CDTs. I have spoken to Katie Tearall and she has confirmed that there was no agreement at the time of commissioning the first DTPs and CDTs about whether there would be renewals or how we would go about it if there were. It was definitely something that we had earmarked for discussion with the Training Advisory Group in the future but perhaps we had underestimated the amount of forward thought this would require. Katie will give some thought to this issue in the coming weeks and discuss it with our directors, and she will be happy to discuss it with you once she has a firmer idea of NERC's stance on this'*.

JU reported on his positive discussions with Ian Gillespie (NERC) and Stuart Edwards (BIS). IG also made a public statement at the NERC Innovation workshop on Extending the Life of Mature Basins in May 2015 about how this CDT is the most successful of NERC's DTP/CDT ventures to date. JU reported that he had supplied BIS with indicative timelines for a decision on renewal to be taken. He confirmed that the Energy Minister's Technology Leadership Board (TLB), of which he is a member, is also very positive about the CDT and that the TLB would soon be receiving presentations from EPSRC and NERC regarding their respective oil & gas policies.

The general view of academic partners was thought to be that their initial match-funding is being viewed by their institutions as seed-corn money with the expectation that the success of the venture would attract more public money for renewal.

After discussion, members agreed that ideally an announcement regarding renewal should be made at the November 2015 Annual CDT conference. Various suggestions of possible action were made:-

- senior University representatives to lobby and possibly meet with NERC
- Strengthening of environmental impact aspects of the CDT to play to NERC's core agenda.
- emphasis on the importance of the CDT training community in providing skilled candidates to fill future subsurface exploration jobs that will continue to be needed
- consider the benefits of re-badging to Applied Geoscience to widen appeal
- approach to EPSRC who might pick up sub-surface geoscience

Members discussed ways of widening links to environmental companies and of strengthening the environmental impact aspects in respect of PhD projects and the CDT website to play to NERC's core

agenda. Consideration of different models for funding to allow small companies / SMEs to join e.g. 20k rather than 40k annual subscription, contributions 'in kind' was also encouraged.

Members were also asked to think about how to increase the visibility of the environmental research on the CDT website, and to suggest individuals with appropriate backgrounds for membership of the various CDT committees.

Action: Members to suggest suitable environmental contacts/companies as sponsors, and from academia, for membership of committees. Senior managers at partner universities should also be encouraged to meet with BIS where possible. The Development Committee will also consider and address the issue of developing greater links with the environmental community within the oil & gas sector.

Action: JU will continue to liaise with BIS regarding their help in contributing towards the CDT's renewal.

John has been approached by the CDT in Carbon Capture & Storage, based at University of Nottingham, and members agreed that it would be useful for him to follow up on this to explore possible synergies for shared training provision/exchange and to build a wider base. He stated that he has the chance to meet with their CDT lead, Colin Snape, shortly for exploratory talks and it was agreed that this should happen and JU will report back to members.

Action: JU

Members agreed that JU/LM should draw up a 'strawman' document showing different renewal scenarios e.g. assume NERC do not renew, renewal but with reduction in match-funding etc.

Action: JU/LM

(iii) Analysis of NERC funding of studentships linked to oil & gas sector: Email response dated 22/05/15 from David Roberts, Responsive Postgraduate Training and Communications Manager (NERC) as follows: *'Adopting a definition of oil and gas in line with activities at the CDT we have DTPs: 5/320 students, CDT: Only Oil and Gas CDT students but 100% of current CDT population = 15/15 NERC funded students in first cohort and other schemes (inc. Algorithm, iCASE, Associated, etc.): 5/ 728 students which gives a final % of about 2.3% of all NERC students are working in Oil and Gas. This number would shoot up if we included all of the projects looking at climate change (the impacts of) oil and gas but not within the scope of what was asked here.'*

Members considered it very helpful to have these figures, but were struck by the fact that outwith the CDT, only 10/1048 students were related to oil and gas (<1%). It was also pointed out that NERC had only given 10 full awards to the CDT and were counting split awards to associate partners as a full studentship in this analysis. It was felt that there was plenty of scope for NERC to place more PhD studentships in this important sector.

(iv) SWOT Analysis: This document was tabled at the meeting and members were asked to review and comment on this as soon as possible and a revised version would be circulated for further comment along with the draft minute of the meeting. A finalised document will then be circulated with the draft of this minute for comment by the end of June.

Action: All

(v) NERC call for sustainable gas and Canadian contacts for Imperial College: These actions are not strictly related to CDT business and KG will follow these up off-line with Liz Fellman and Anna Korre respectively.

Action: KG

(vi) Committee membership: An updated committee organogram was tabled showing new appointments following the previous committee meeting in November 2014. Unfortunately Maggie Cusack (Glasgow) had indicated due to other work commitments, she is unable to act as an associate partner representative on either the Management or Development Committees and Lisa MacNeil

(Southampton) has not replied to any email or voicemail invitations. Zoe Shipton (Strathclyde) joined the Training Academy Committee as the associate partner representative and Peter Burgess (RHUL) has joined the Graduate Committee in a similar capacity. Andy Bell (Shell) and Ole Martinsen (Statoil) have also joined the Training Academy Committee as industry sponsor representatives.

Action: All members to provide LM with new suggestions of individuals at associate partners who could be approached to act as associate partner representatives on the Management and Development Committees.

(vii) Email aliases: LM uses list emails for each committee which members can copy for their own use

(viii) Launch, Induction and EIR residential course costs: A spreadsheet detailing costs for all courses run at Heriot-Watt to date (above courses plus one-week Petroleum Basins course run by Shell personnel) was circulated prior to the meeting.

Action: KG to provide an indicative day rate for industry speakers in order to demonstrate the financial benefit the CDT is deriving from the engagement of industry and academic contributors to the Training Academy courses.

(ix) Mature Basins course, Manchester: The detailed course schedule had been provided shortly before the start date.

(x) Guidance on Training Academy expenses including Travel Policy: A draft Travel Policy and Guidance to students and supervisors on the use of the individual RTSG allowance have been circulated.

Action: Members to provide comment to LM in the same timeframe as the review of this minute.

(xi) Offers to contribute to the Training Academy provision: These are now being collated and progressed by the Training Academy Committee

(xii) Nautilus course access: The sponsor agreement with Nautilus was finally signed on 22/05/2015 so the course listing could not be circulated before this date. *Action subsequent to the meeting:* A web announcement has been posted on the CDT website and the link to this article was sent to all academic and industry partners, PhD supervisors and CDT students on 29/05/2015.

Action: AC to circulate open access course portfolio and listing of optional courses to members

(xiii) Roles and responsibilities document for students and supervisors: A draft document has been circulated.

Action: Members to provide comment to LM in the same timeframe as the review of this minute.

(xiv) Allocation of remaining 2 NERC studentships for 2014 entry cohort: LM advised that Imperial took up one of the studentships so that for future years, they have one NERC studentship to allocate and will match-fund the remaining 4. Keele and Newcastle both receive 0.5 BGS BUFI funding which covers the NERC allocation, but also took a 0.5 NERC scholarship so they have 0.5 NERC studentship to allocate over the next two entry cohorts and will match fund another 1.5 studentships.

(xv) 2015 PhD project titles: The listing was circulated to members following the November 2014 meeting. Projects were advertised in the January 2015 editions of Nature and New Scientist and were listed on FindAPhD from December 2014 – March 2015. 28 students have been successfully appointed and a re-advertisement for one place at each of Exeter (Camborne), Heriot-Watt and Royal Holloway has been placed in FindAPhD from March – July 2015. The deadline for applications is 24th July 2015. No response had been received from Joe Cartwright or Bob Gatliff regarding the action to group these titles thematically and members agreed that this would no longer be useful.

(xvi) Industry Advisory Board input to Awards Committee: See item 5c below

(xvii) Management Committee members visiting associate partners to promote understanding of the CDT and encourage the submission of a wider range of PhD project titles: This action is ongoing for all core partners and is linked to CDT renewal activities. LM will circulate an electronic copy of the new CDT A4 flier for use by partners at conferences, university events etc. **Action: All / LM**

3. Legal Framework

(a) Update on partner contracts: LM confirmed that draft contracts were circulated to partners in November 2014 and comments collated through December and early January. Revised contracts incorporating the suggested amendments were circulated by Derek Brown, Heriot Watt's legal officer on 31/03/2015 with a request for final comments by 17/04/15 to allow for final contracts to be distributed for signing by 30/04/15. Further comments have been received from some partners and these are only now being incorporated into a final document that each member will sign i.e. one document covering all partners rather than individual contracts for each organisation. Two companies, ConocoPhillips and OMV have not yet paid the annual subscription for 2014/15 and KG offered to follow this up as Chair of the Industry Advisory Board.

Action: LM to circulate Committee members with monthly update on contracts distributed, signed and sponsor payments received and to contact KG if necessary regarding the industry subscription issue.

As a result of some universities deferring the take-up of their NERC studentship for the 2014/15 entry cohort, there is a potential for there not to be sufficient studentships in NERC's grant for the second cohort to cover the full allocation due to partners should everyone claim their entitlement in 2015/16. The local Financial Director at Heriot Watt has agreed that Heriot Watt will fund this for the first year as a timing issue as a correspondingly lesser number of studentships will be required by partners for the 2016/17 entry cohort and HWU will recoup the costs then.

Members expressed some disquiet at the apparently anomalous funding situation regarding Southampton/NOC. NOC and Southampton effectively act as two separate associates, each receiving a 0.5 studentship from the NERC grant, but NOC's 'match-funding' of 1.5 studentships is allocated to the Southampton/NOC partnership and not available to all CDT projects as the BGS funding is. There is therefore a difference in how NERC-affiliate funding is being allocated within the CDT and NOC is also benefitting from a 0.5 studentship from the NERC main grant.

Action: GH is a member of the NOC Association Steering Committee and will make a discreet approach to NOC to pass on the Committee's concern about this situation and to open a dialogue about future funding allocation.

(b) University of Oxford presentation: GH tabled a document outlining the funding situation for Oxford's CDT students in 2014 and proposed funding for the 2015 entry cohort. He indicated that at the time of signing the bid document and subsequent recruitment of the first cohort of PhD students, Oxford had had the mistaken view that external sponsorship of the PhD studentships was an allowable mechanism by which core partner institutes could provide their two annual matching studentships. Since realising that all other core partners are providing institutional funding for matching studentships, Oxford has worked hard to achieve the same position.

RB highlighted that the intention was to focus on UK rather than overseas students to retain high quality students who may go elsewhere, or not take up a position without funding, as opposed to overseas students who are already committed to coming to the UK to study. KG confirmed that he had instructed

Shell colleagues not to sponsor overseas students on CDT projects. He also noted that sponsorship of CDT projects by companies which are not CDT sponsors is against the spirit of the CDT model as this effectively gives that student access to training paid for by other companies, as well as providing non-subscribing organisations with potential access to the pool of CDT talent. It was pointed out that this principle had been adhered to by everyone and applied to companies e.g. BG Group, who had originally sought to have their Brazilian students enrolled on the programme. It was highlighted that in accordance with this principle, the Shell students based at HWU are not part of the CDT scheme.

There was also an objection to the use of funding linked to citizens from a particular country not only does this restrict the open competition to CDT projects, but all operators have to make a commitment to a Social Responsibility contract which sponsorship of a local citizen fulfils. The existing CDT sponsors do not make use of the CDT in this way however, and may be reluctant to give others this advantage.

Following discussion members accepted Oxford's position, on the undertaking that, by the third year of intake, Oxford will have been able to move fully to the same position as other core partners in providing six institutionally funded matching studentships for open competition over the 3 annual intakes. GH indicated that this situation would be achieved and that Oxford would be in a position to offer three studentships for 2016 entry (1 NERC studentship, 1 Clarendon Scholarship, 1 departmental scholarship funded from residual money from existing departmental grants). This decision is pending written confirmation from GH of Oxford's funding position for 2016 entry

Action: GH to send written confirmation to LM of the funding situation for Oxford students for the 2015 entry (including clarity about the funding route for the Myanmar studentship) and to commit to the institutional funding of two studentships for open competition for 2016. LM will then circulate this to members of the Management Committee.

Action: GH offered to seek to source a CDT module and perhaps also host a future CDT committee event and LM will liaise with him to determine a date and secure a venue.

4. Industry sponsorship

(a) BG Group/Shell merger: JU had visited BG Group Brazil, whose Technology Group is the source of the company's current CDT sponsorship, and had discussed the 2nd year renewal of their CDT subscription. This was 3 weeks before the announcement of Shell's interest in BG Group and indications at the moment are that BG Group will continue with 'business as usual' so there is hope of renewal.

(b) Nautilus announcement: JU signed the sponsorship agreement Gary Nichols on 22/05/15 with Nautilus agreeing to run one course for 2nd/3rd year which will be mandatory for all CDT students, plus each CDT student, with their supervisor, can choose one optional course from the company's portfolio of open access courses. Students can also access additional courses by taking up 'free places' on courses that have not been taken up by pre-paid delegates for example. Members were advised that with current training budget restraints operating in many companies, there may be more of this type of place available at the moment so it is a good time to take advantage of this part of the agreement. JU also informed members that all Nautilus courses now have Geology Society accreditation.

5. Reports from NERC CDT Committees

(a) Training Academy Committee: JU reported that Anna's position as Training Academy and HSE Officer is currently funded by a fixed term NERC Innovation grant which concludes in November 2015. HSE provision is a requirement of the industry sponsors in funding the training programme and KG stated

that the IAB has indicated that these funds should be used to extend this post and that IAB members regard the continued HSE and logistic provision for the Training Academy as an essential safeguard for their investment.

JU also reported that at the last Training Academy Committee meeting in March 2015, Statoil had indicated their willingness to consider an early commitment to a further 3 year renewal of their CDT subscription. KG expressed a willingness to explore a similar process within Shell.

Action: JU to send similar letter inviting renewal as the one already sent to Statoil and KG will progress this within Shell.

The Committee is gathering further offers of training provision and is aiming to have a calendar of existing and potential courses compiled by early July 2015 in order to start firming up commitments and course content so that a full programme can be presented to both 1st and 2nd year students by September 2015. KG suggested that as companies all have environmental divisions, IAB members should be asked to provide appropriate contact names to AC to progress.

Action: KG will send web link to Shell's environmental division's webpages and make link with the appropriate contact in Shell for the CDT secretariat to pursue. AC to contact IAB representatives for details of the appropriate environmental contacts within their organisations.

(b) Graduate Committee: Nick Schofield (Aberdeen) had chaired the first meeting of the committee during the March residential course at Heriot-Watt. The student members had participated enthusiastically and had used the opportunity of the subsequent residential course at Manchester to feedback to the cohort and glean further responses from the student body. All student feedback is viewed by the Training Academy Committee and acted upon or reported back on to the students.

(c) Awards Committee: RB thanked the industry representatives for their most valuable contributions to the PhD project assessment and validation process. He passed on encouragement from the Committee to project proposers to submit more academic projects which deliver training in core geoscience skills and particularly those that involve field work. He and KG commented that the PhD should be exciting and original in scope in itself, but the training gained from looking at, for example, orogenic structures in 3D thinking, is also enormously valuable for career geoscientists in industry even if the research itself may have limited direct relevance to industry as those topics are already being covered by industry researchers.

As academic members of the committee cannot put forward projects for consideration AF requested that he take over Anna Korre's membership of this committee and that she rotate to a different committee.

Action: Members thanked AF for assuming membership of the Awards Committee and asked him to discuss the possibility of Anna Korre joining the Development Committee.

Members thanked RB and the committee for their sterling efforts in this important task.

6. Forward Planning

(a) Management arrangements: This is linked to the renewal of the CDT and whether NERC continue as a main funder and if so, whether they will run this as a competitive bid. AF reminded members that the original bid committee had agreed that the rotation of the lead role would be considered at renewal.

(b) Development Committee remit: Members discussed the main elements of a proposed remit for this committee such as engagement with SME's and environmental organisations and developing

international partnerships. It was suggested that having someone with experience of holding together a multi-partner consortium over time as a member of this committee would be beneficial and Jon Gluyas (Durham) was proposed as a possibility.

Action: JU/RB/LM will develop a draft remit and responsibilities document for circulation to Management Committee membership for approval and RB and AA will approach Jon Gluyas. Members confirmed that any proposals from the Committee for development or those linked to the renewal of the CDT must be ratified and implemented by the Management Committee.

(c) Report on process for extending NERC funding of CDT: Much of this discussion is reported under the relevant item in Section 2 above. Various financial models were proposed based on the level of RCUK funding and estimated commitments from academic and industry sponsors.

Action: JU/LM to draw up examples of funding outcomes based on these different scenarios for consideration by the Management Committee by the end of June 2015 (see Item 2 (ii) above).

(d) Analysis of NEC studentship funding for oil and gas-related projects: see relevant item in Section 2 above.

7. Date of next meeting

Members agreed to hold the next Board meeting on 3rd November 2015 at Heriot Watt to coincide with the Annual Conference (2nd November). The IAB meeting will also take place that day. The Spring 2016 meeting will be held in Oxford.

Action: LM to circulate members with Doodle poll for meeting dates in late May 2016.

ACTIONS AND AGENTS

Action	Agent(s)
LM to liaise with LF re follow up data release issue within NERC via Mark Thorley	LM / LF
LM to liaise with RG discussions with Malcolm Fleming from CDA re data release to Management Committee members to ensure feedback from academia is provided to the review	LM / RG
JU to continue to liaise with BIS regarding CDT renewal	JU
Members to suggest suitable environmental contacts/companies as sponsors, and from academia, for membership of committees. Senior managers at partner universities should also be encouraged to meet with BIS where possible	All
Development Committee to consider and address the issue of developing greater links with the environmental community within the oil & gas sector	Development Committee
JU to follow up on approach from CDT in Carbon Capture & Storage, based at University of Nottingham, to explore possible synergies for shared training provision/exchange and to build a wider base	JU
JU/LM to draw up a 'strawman' document showing different renewal scenarios e.g. NERC do not renew, NERC renew with same/increased funding but with reduction in academic partners' match-funding	JU / LM
Members to provide comment on SWOT document to LM by end of June 2015	All
KG to liaise with LF re NERC's winter 2014 call re sustainable gas and with Anna Korre re Canadian contacts	KG
Members to forward suggestions for possible contacts at associate partner universities as representatives on the Management and Development Committees	All
KG to provide LM with average speaker day rate for inclusion in Training Academy costing model to reflect Full Economic Costing of this provision	KG
Members to provide comments to LM on the draft Travel Policy and Guidance to students and supervisors on the use of the individual RTSG allowance by end of June 2015	All
Members to provide comment to LM on the Roles and Responsibilities of Students and Supervisors document by end of June 2015	All
AC to circulate open access course portfolio and listing of optional courses to members	AC
Management Committee members to utilise opportunities with associate partners to promote understanding of the CDT and to encourage the submission of a wider range of PhD project titles. LM to circulate CDT A4 flier for use at conferences and other events.	All / LM
LM to circulate Committee members with monthly update on contracts distributed, signed and sponsor payments received	LM

GH to make a discreet approach to NOC Steering Committee to pass on the CDT Management Committee's concern about NOC ring-fencing its match-funding to Southampton/NOC projects.	GH
GH to send LM written confirmation of the tabled proposal and Oxford's commitment to move to the agreed CDT funding model of 1 NERC studentship and 2 institutionally match-funded studentships by cohort 3, to include a re-wording of the source of Myanmar-linked scholarship. Upon receipt of this letter, LM will circulate it to members of the Management Committee for ratification.	GH / LM
GH to investigate opportunities for Oxford to offer a course to the CDT Training Academy programme	GH
GH to investigate the possibility for Oxford to host the Spring 2016 CDT Management Board meeting and will liaise with LM regarding date, venue and logistics	GH / LM
JU to write to Shell inviting early renewal of further 3 year sponsorship (as per Statoil).	JU / KG
KG to send details of appropriate contact in Shell's environmental division for the CDT secretariat to pursue.	KG
AC to contact IAB representatives to request contact details for appropriate individuals in industry sponsors' environmental departments	AC
AF to approach Anna Korre re her joining the Development Committee	AF
JU/RB/LM to develop a draft remit and responsibilities document for the Development Committee and circulate to Management Committee membership for approval	JU / RB / LM
RB / AA to approach Jon Gluyas re membership of the Development Committee	RB / AA
LM to circulate members with Doodle poll for meeting dates in late May 2016	LM