

Technical Conservation Research and Education Group

Best Value Review

Final Report to Historic Scotland Senior Management Team

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Author : David S Mitchell

1.0 Executive Summary

TCRE Group currently operates across a range of areas relating to technical aspects of the built environment. It is highly regarded in a number of areas – particularly technical research and education, and in work related to traditional building skills. Areas of technical expertise in the Group are world class and highly valued.

Consultations reflected the need for the Group to be more focused, tied more closely to corporate objectives, and at the same time have its area of work recognised as central to the aims of the organisation. It is very strong at networking and building positive partnerships with external bodies. Internal partnerships in Historic Scotland and Government require more development.

Technical research agenda should be more consultative and tie into Agency research strategy. Applied conservation services should be re-focused to better reflect demand, and the provision of specialist technical knowledge given increased prominence. Both are highly valued, but require easier means of access by other Groups.

Research and activity around traditional materials and skills continues to be important in achieving Agency objectives, and the Group should have a more focused role here.

The provision of technical education and outreach is highly regarded particularly new initiatives in recent years, and there are areas of activity to be reviewed further here to maximise benefit.

Taking account of existing and emerging operational demands, it is proposed that the following will be key areas of activity for the Group in the future ;

- Scientific and technical research
- Applied conservation
- Traditional building materials and skills
- Technical Education & Outreach

The Group should be renamed **Technical Conservation Group**. The existing Divisional structure should be removed and management of activity compressed and re-structured, with Unit Heads reporting directly to Group Director. This requires re-organisation of resources, and this is proposed.

2.0 Introduction & Acknowledgements

This review was undertaken as part of the ongoing best value assessment of Government services. Appendix A contains the project initiation document in full.

The full scope of those who participated in the consultation is provided in Appendix B.

Thanks are due to all staff and colleagues from other parts of the Agency who contributed to the process, and to external stakeholders who made similar contributions.

3.0 Background

TCRE (Technical Conservation, research and Education Group) was established in 1993 with the remit of improving standards and quality of building conservation work in Scotland. It has developed a much-admired reputation for its work in the provision of technical research, services and educational material. In the past two years new challenges have faced the Group, with some areas of operation (notably skills and education – outreach, and topic specific areas of technical research) coming to the fore. This review occurs at a time when the aims of the Group require re-appraisal, as does the means of delivering against them.

The review was undertaken on the basis that resources allocated to the areas of activity would remain broadly as they are for the current corporate plan period.

3.1 Current objectives and outcomes

TCRE key objectives:

- 1: To develop and define technical conservation standards and policy;
- 2: To address the lack of appropriate technical and professional knowledge;
- 3: To address the lack of relevant conservation craft skills;
- 4: To address the shortfall in availability of traditional building materials;
- 5: To provide specialist conservation expertise in stone, structural painting, easel painting, scientific support, and environmental monitoring techniques.

3.3 Current Delivery and functions

TCRE Group comprises two Divisions – Historic Scotland Conservation Bureau (HSCB) and Historic Scotland Conservation Centre (HSCC), operating from Longmore House, South Gyle and Stenhouse, all in Edinburgh.

The full structure is shown in Appendix C. The Group Director sits on the Senior Management Team and Historic Scotland Board. HSCB has twenty staff, HSCC has twelve.

The variety of functions of the group are reflected in the range and diversity of its staff. Many of the staff are highly specialised and recognised as such at national and international level.

Areas of activity have been defined as six discreet areas. These are identified as :

- Technical and scientific research
- Traditional skills
- Traditional materials
- Education and outreach
- Specialist technical advice
- Specialist conservation services

Indicative summary of current activity ;

3.3.1 Traditional Materials

- Developing an understanding of traditional materials through research.
- Promoting the continued supply and encouraging re-instatement where feasible.
- Encouraging training in the supply chain.
- Supporting SSLG in this activity in identification of demand of building stone and slate.
- Understanding the technological and craft aspects of producing traditional materials.
- Representation on Scottish Forum for Proskills, the Sector Skills Council for material supply.
- Providing information on sources of supply for traditional materials via the TCRE Enquiry Service.
- Working with BGS (British Geological Survey) to map and identify geological building stone resources and to encourage their use.

3.3.2 Education and Outreach

Delivery of knowledge from research at a variety of levels – from academic to homeowners using a variety of media.

Range of technical literature - Research Reports, Technical Advice Notes and INFORM Guides for example. As printed media and increasingly as electronic delivery.

Electronic learning mediums in conjunction with Learn Direct and Build and Glasgow School of Art.

Delivery of :

- Major technical conference every two years.
- Specialist technical seminars with partner organisations.
- Presentations by staff to conferences and seminars.
- Homeowner's seminars in conjunction with CHT's, CARS and THI's.
- Local Authority technical seminars.
- Trade and public events – Stone Show and Homebuilding and Renovating Show.
- Conference displays and outreach – RIAS, RICS etc.
- Internal training delivery on demand.
- Craft skills events with other partners.

3.3.3 Specialist Technical Advice

Provided to :

Other parts of the Agency (Inspectorate, PIC, Policy Group).

Local Authorities

National Trust for Scotland

Architects, Surveyors, Engineers, contractors and building owners via the TCRE Enquiry service (currently c.1500 - 1800 per annum).

TCRE has significant technical specialisms in the fields of ;

- Energy Efficiency
- Geology, stone and masonry
- Materials analysis
- Ferrous and non ferrous metals
- Windows
- Architectural paint
- Industrial heritage
- Fire
- Painted surfaces
- Stone cleaning
- Brick

3.3.4 Specialist Conservation Services

Supply of specialist conservation services in :

- Stone conservation
- Painted surfaces conservation
- Materials analysis

Specialist services are developing in building pathology and digital documentation and rendering. Scientific provision and analytical capabilities have increased to enable primary research and support services.

TCRE has supported professional body accreditation through the Edinburgh Group which TCRE Director has chaired.

4.0 TCRE : Objectives and functions analysis

The primary areas of activity are here explored in some more detail, incorporating views from consultation with internal and external stakeholders.

- Technical and scientific research
- Traditional building skills
- Traditional materials
- Education and outreach
- Specialist technical advice
- Specialist conservation services

In general terms there is a strong feeling that external partners better see the value of TCRE activity than internal colleagues. There is a sense amongst staff that TCRE activity is core to that of the Agency, but is often not identified or recognised as such, which has led to some frustration. This is in part a historical view, and perhaps also a result of lack of understanding of what the Group does (and can do for that matter). There is a strong desire amongst staff to re-focus the activities of the Group. There is a positive sense of new opportunities driving change.

4.1 Technical and scientific research

TCRE has a significant national and international reputation in relation to technical research and dissemination of that knowledge. Many of the team have significant technical expertise which is widely respected and expressed in the consultation for this review and the 2004 Stakeholder Research which acknowledged that only a Government Agency such as Historic Scotland could fulfil the technical expertise role as a 'centre of excellence'. Recent moves to build in – house expertise and capacity for research are strengthening that aim.

There is a general feeling that there requires to be a more transparent and consultative process in setting out the strategic technical research agenda. Whilst much of the core research activity to date has been viewed as worthwhile, stakeholders would like to see mechanism for providing input to the research agenda. This should fit into a broader research strategy for the Agency.

Much of TCRE research and publication activity has been opportunistic where live projects or funds have been available. The need for live projects and illustrative case studies to underline and inform research are considered important.

TCRE is considered to be very successful in being pro-active with external partners and working with others to address the lack of technical knowledge by research. This is achieved by internal and external commissioned research, by partnering with academic bodies and agencies (Scottish Building Standards Agency and English Heritage for example). TCRE has published reports undertaken by others to increase technical knowledge (PhD thesis and SSLG – Scottish Enterprise Glasgow Project Methodology). Resources for commissioning

primary research have been fairly limited, and the Group have been inventive methods in achieving research outcomes.

The work of the Group in the technical research field is highly regarded - 'one of the best things Historic Scotland does – envied on an international scale' - although some external stakeholders feel that some areas of research are too specialised or whimsical. Colleagues in Policy Group would like to see a clearer technical research agenda which interacts with policy activity, whilst PIC would seek a greater role in the development and participation in technical research programmes. Requests from stakeholders for broader socio – economic research perhaps reflects a need for this to be considered on a wider basis by the Agency.

A common theme amongst internal colleagues was that TCRE needed to be more inward looking at times, and could perhaps achieve desired objectives more efficiently by pursuing through internal government channels.

Networking is considered to be important, and many of the externally positive views of the Agency arise from interaction with TCRE staff.

The primary scientific base has been extended in 2007 with a team of four scientists and a developing equipment resource base for primary scientific research including weathering, decay, materials analysis and building recording. In 2007 a preventative conservator function was replaced by a conservation science role which has caused concern for members of HSCC staff. Discussions with PIC Conservation and Maintenance and Collections have suggested that they did not see the need for this service from TCRE in the future, commissioning work when a need is identified.

Developing expertise in the digital documentation and understanding of the built environment by digital modelling is a growing area of specialist expertise. Such techniques have been identified as common practice in time, and TCRE has invested resources in developing skills in this area, working with Glasgow School of Art, world leaders in the field. There are significant opportunities to use this emerging technology in the built environment field for recording, management, assessment and analysis.

Conservation Internships in specialist topics hosted by TCRE were created to take advantage of specialist knowledge in TCRE in 2006. Part funded studentships with academic partners at MRes and PhD level on specific topics have been established in 2007 which are considered to be perhaps better value and potential efficiency savings.

Two Research Fellowships at postgraduate level on building technology subjects hosted within TCRE have proven to be highly successful, but there is an opportunity to consider a part – funded approach similar to the Conservation Internships.

TCRE is at the forefront of technical research in relation to energy efficiency and traditional buildings. As part of the climate change agenda, this is likely to have a prominent role in the work of TCRE for the next 5 – 10 years and beyond. The investment of staff resources is significant but considered worthwhile as working towards addressing a primary issue for the built environment, and building a corporate knowledge base.

Fire management in partnership with RCAHMS and Fire Services across Scotland is established through the Scottish National Fire Database Project to significant acclaim.

A base level of research continues on traditional materials and building techniques to fill known information gaps. This has been eroded to some extent as other pressures have come online, but is still an important area of activity.

Due to the broad range of specialist knowledge required to manage and care for the built environment, TCRE can never be a panacea for technical knowledge. It is perceived as a centre of excellence in a range of technical areas, but the current balance of in – house capabilities coupled with externally partnered and procured work is a logical one. There has been a move towards increasing internal output rather than contracting out to increase efficiency, but some care is required to ensure we still take advantage of external specialist knowledge and views. A balance of in – house, collaborative and commissioned research is the best method of achieving this.

Key Questions	Technical and scientific research
Can we identify a need for this function ?	Yes. As the government body with responsibility for the historic environment, understanding technical issues is fundamental to informing that work. There is a demonstrated ongoing need for the results of such research in practical applications and providing sound advice to Ministers.
What is the best delivery mechanism ?	A balance of in house research, collaboration and commissioned work. The range of specialisms required is too vast for any one body to cover all bases. Active research in the discipline relating to Scottish issues is minimal outside of TCRE, although topic specific research is undertaken by others. The sector looks to Historic Scotland for leadership here, and a flexible approach of internal research and working in collaboration with academia and other partners is the most effective delivery mechanism. SBSA and BRE technical research centres largely around new build and meeting existing regulations – both see us leading in the traditionally built environment. The need for a corporate research strategy is clear and group activity should actively engage with this.
Future demands ?	Significant ongoing demands to understand traditional material and technology issues. Sustainability, carbon foot printing and energy efficiency pressure on traditional buildings will be ongoing and high profile in the next five years.

4.2 Traditional building skills

A significant area of activity, which has come to prominence in the past two years and is likely to remain so for some time to come. TCRE has become a national focal point for advice relating to traditional building skills. TCRE previously had a role in direct training in specialist conservation areas, with a range of more strategic activities ongoing. The increased profile of traditional skills shortages from 2005 onwards saw a gap emerging from the point of view of industry and the client base in terms of who was taking the lead here. Most expected Historic Scotland to do so, but there was a lack of clarity in terms of the role of the Agency, and that of ConstructionSkills as the Sector Skills Council.

There has been significant and positive development in this area. TCRE and ConstructionSkills have developed a close working relationship which has resulted in a Sector Skills agreement. The clarification of roles has to date evolved where ConstructionSkills and Historic Scotland work in partnership to address the skills and knowledge gaps required to maintain and conserve traditional buildings. TCRE has developed a strong network of those with an interest in this area in Scotland, to include FE and Higher educational establishments, industry and clients.

TCRE has a direct role in direct training through its Craft Fellowship programmes in specialist trades, where low numbers can have an impact on the sector, and where more traditional training routes are unlikely to be available.

TCRE has a role in evaluating skills and knowledge gaps and in facilitating the development of qualifications and resources with others to address the issues.

The role of Historic Scotland in the development of the National Progression Award in Conservation of Masonry saw active engagement with partners across a broad sector. Resource input was minimal compared to the positive outputs achieved. This process saw our reputation in the sector considerably enhanced, with many expressing a view that ‘only Historic Scotland could have made this happen’.

Active engagement at a strategic level with Scottish Enterprise and Highlands and Islands Enterprise, SQA and ConstructionSkills has resulted in significant benefits to the built environment in terms of investment and changes in approach.

The development and delivery of the £2.5M HLF Bursary scheme with resource investment from a broad range of partners has much potential in addressing masonry skills gaps across Scotland over the next four years. TCRE’s role as facilitator seems to be one which works well, working with others at a strategic and practical level being more effective than attempting to be a hands – on training provider other than in specialist areas.

The role of TCRE in leading Agency activity in this area has been confirmed in the ministerial response to the HEACS report on skills and materials.

Resources within the Group are currently insufficient to cope with the current and projected demands in this area. The significant impacts which are achievable would suggest that this would be an effective use of resource investment.

TCRE has representation on key bodies in this regard ; on the board of NHTG (National Heritage Training Group), and on the board of COTAC (Conference on Training and Architectural Conservation).

Working with HLF, CHT's and THI / CARS schemes to advise and add value to training and education activity within their grants and work programmes has had positive responses from these partners. Adding value by working in partnership with Investment team has shown benefits (Mansfield Place Church training initiative for example), and there are likely to be future benefits here.

As the primary building craft skills FE College in Scotland, TCRE has developed a close relationship with Glasgow Metropolitan College to develop a Centre for traditional Building skills within the College framework via a Teaching Fellowship and chairing the College Advisory Board for Construction. A similar relationship is developing with Telford College in Edinburgh, and smaller colleges in the North of the country. This has enabled the traditionally built environment to have a more prominent place in FE and Higher Education. Close links are also in place with Architectural Conservation postgraduate programmes at Dundee and Edinburgh College of Art, where TCRE provides educational resources and guest lecturers to maintain links. This role has been positive in the specialised conservation field and to a limited extent in the building craft area. There is much potential to employ a similar methodology in influencing architectural and building surveying in Scotland, to enhance the training of those who will care for the built environment in the future.

Emerging roles for TCRE would seem to be in the identification of gaps, facilitating skills and education development, and in supporting high quality resources. This strategic approach provides for limited resources to have a greater impact. It requires close working with external partners. External industry partners look towards Historic Scotland for guidance and leadership in this area, and we are best placed to provide an independent view, and to act as facilitators in some areas. The fragmentary nature of this sector in Scotland requires a national specialist overview. As the Sector Skills Council for this area, ConstructionSkills are also happy with this relationship, and it brings a range of positive impacts to the built environment. There is scope for us to work more effectively with government colleagues, however.

Key Questions	Traditional Building Skills
Can we identify a need for this function ?	Yes. As substantiated by the Scottish Skills Audit, Glasgow Project and sector research there is a skills gap in our sector. Only Historic Scotland is best placed to understand and take a national overview for traditional building skills and specialist conservation skills (a view also held by SSC Constructionskills and most of the sector). Ministers response to HEACS report identifies specific areas of activity.
What is the best delivery mechanism ?	Constructionskills have sector responsibility but are clear in the demand for partnership with us in the traditional building sector . The National Heritage Training Group has deferred activity to Constructionskills Scotland in this area. Our role is to facilitate and to encourage co-ordination of key players. Production of training guidance with others is important and high impact, as is promoting sector training with Constructionskills, FE sector, and the new Skills Agency – all well established relationships. In – house delivery of specialist training is justifiable as it is unlikely to happen otherwise (HS Fellowships), and opportunities to have significant impact on training work best in partnership (Masonry Training scheme with HLF, HS and Skills Agency).
Future demands ?	Existing commitments for us to review training provision gaps and work with others to effect solutions. Four year commitment to deliver masonry conservation project. Ministerial response to HEACS report gives deliverables. Strong and increasing demand in this area projected to grow. FE sector demands growing here.

4.3 Traditional Materials

Technical research into traditional materials has inevitably led to consideration of continuity of supply of such materials and the skills in production. Beyond the materials themselves, there is increasing activity and interest around the maintenance and continuity of supply for these materials and in re-establishing supplies for technical, socio – economic or environmental reasons (slate and building stone in particular). Much good work has been done in this area with SSLG and BGS for stone, but there is a fine line between encouraging and facilitating use, and interference in the market place. The role for TCRE here is perhaps to understand, identify and encourage the use of such materials.

The supply of traditional materials (and skills of course) is considered fundamental to what the Agency does and there is a feeling that this is an area where better integration with SG colleagues could reap greater benefits – in planning for example – and protecting sources of traditional material supplies.

TCRE has a strong reputation in relation to stone as the key Scottish building material, which has been a fully justified approach. As technical thinking evolves there will be a need to re-visit areas of previous research, and to establish baseline research in other traditional materials. Much of the available technical research in materials – lime – thatch – slate etc. has been produced or facilitated by TCRE, and is unlikely to be considered by other organisations (such as BRE or SBSA) in any detail.

Organisations such as SSLG are playing an important role with our support, but TCRE provides for a national overview that no other organisation is able to provide externally.

Key Questions	Traditional Materials
Can we identify a need for this function ?	Yes. As the government body with responsibility for the historic environment, understanding traditional material issues is fundamental to informing that work. There is a need for providing sound advice to Ministers on the topic as sustainable and ethical procurement increasingly come to the fore. Glasgow Project, Ministerial response to HEACS report on skills and materials and National Skills Audit give direction.
What is the best delivery mechanism ?	Stone is the primary focus and partnership working with SSLG and BGS is key here. HS role in working with government colleagues in identifying and safeguarding sources is becoming increasingly important - and not best exploited at present.
Future demands ?	Sustainable procurement is likely to encourage increasing use of indigenous materials for the built environment – existing and new. Planning issue increasingly prominent. Maintenance issues increasingly high profile. Improving technical awareness will prompt expectations. Increasing dichotomy of promoting care of historic environment without appropriate material supplies.

4.4 Education and outreach

Education and outreach has developed into a key function of TCRE activity. Originally to disseminate the results of technical research, this role has developed to promoting best practice, providing educational activities to building professionals, local authorities, homeowners and young people.

Key audiences are those involved in technical aspects of caring for the built environment, particularly building professionals, whether in industry or the public sector. This should remain the primary focus. Education to building owners is challenging but nevertheless strategically beneficial in a targeted manner (via Local Authorities, CHT's). Young people have not previously been considered a target audience for TCRE. Working with others, this area should be targeted by production of educational resources for use within the national curriculum. Resources should be deployed to have maximum impact at a national level.

The recent development of technical seminars delivered to local authorities where topics are covered on the request of the local need are highly regarded. The benefits in Agency profile and impact are significant, as are the engagement opportunities to guide the Groups research and education activity. These can be resource – heavy in terms of staff time, but are seen as strategically worthwhile.

Recent developments in the way TCRE delivers its research in the development of the INFORM and Short Guide series, and increased use of electronic media are well regarded. Increased access to electronic publications is a common response from stakeholders consulted. Joint initiatives with Learn Direct and Build to develop e and blended learning packages for our sector have proven successful. This developing learning methodology is considered to be central to learning in the future on a range of fronts, and TCRE are well positioned to deliver here. This will require skills development within existing staff, and Learn Direct and Build have suggested this could be facilitated under the standing Minute of Agreement. The developing specialisms of TCRE in this field should be of additional potential to the Agency Communications and Web team – stronger working relationships are required in this respect.

The Resource Centre provides for a repository of specialist technical knowledge in the form of a variety of media arising from TCRE collaboration with other technical bodies around the world. It is a rich resource in that regard. Historically it has also served a research function although this has diminished as the approach to research within the Group has changed.

The Resource Centre co-exists with the main HS Library, and some critical evaluation was made in the merits of blending the two collections. It was felt that this would likely dilute the strengths of the Resource Centre Collection, and that TCRE would continue to collate highly specialised information not perhaps collected by the main library, which has a broader remit. The need for a specialised member of staff to maintain this collection is questioned however, with the potential to retain the collection as identifiably TCRE, but operated as part of a broader administrative function.

TCRE has run a small grants scheme since its inception. With recent adjustments, the scheme (with a budget of around £25k per annum) provides travel and subsistence grants, publication and events grants, and specialist conservation equipment grants. Recent activity has focused

on promoting the grant scheme to those directly involved with building conservation. This has met with a positive response but the scheme is overly complex for the sums involved. Advice from Investment team and how their sponsorship fund is managed would be beneficial. The current scheme has provided significant funding to non-building – related applicants, including textiles, paper and books. The grant scheme should be reviewed to focus activity on core Agency objectives relating to the built environment. This is likely to be unpopular with those on the periphery of building conservation but is valid nevertheless. The grant scheme does have potential to impact positively despite its relatively small scale. It provides potential funding for applicants not generally available elsewhere.

Agency colleagues see an obvious role for technical education internally for TCRE in keeping staff up to date with current issues and demonstrating ‘technical leadership’. This is the approach employed by English Heritage with the Conservation Section – TCRE equivalent. There are a range of technical specialists in Historic Scotland who network with TCRE and there is a role here in facilitating cross – agency working on technical issues.

Increasingly outreach activity and logistics are being managed in – house rather than contracted out under efficiency saving objectives. This has potential to be further developed and is considered to be more efficient and beneficial in staff development.

Work with Scottish Screen Archive and Learn Direct and Build illustrates well the ability of the Group to lever added value. The Scottish Archive if Building Skills project is taking the archive film and audio footage of Scottish Screen and Edinburgh University relating to traditional building skills and material production, and making this available via the web as an educational resource in collaboration with Learn Direct and Build.

Activity in partnership with PIC Education Unit has increased over the past two years in delivering outreach to young people centred on technical aspects of the built environment. TCRE and PIC Education often have distinctly different audiences, but there is an identifiable need to work together more effectively in educational activity in the lower to mid age ranges. There is much potential to influence curriculum activity, which needs to be resourced over the next 3-4 years. This fledgling relationship works well and should be encouraged.

TCRE support of the Edinburgh Group has facilitated the development of professional body conservation accreditation schemes. This has caused some internal and external difficulties and is an area of some sensitivity due to differing viewpoints across the Agency. The Edinburgh Group activity is being passed to another group for continued development. It is not known at this time what support might be requested of the Group in the future, but is likely to be more limited than previous.

The management and distribution – sales of publications in particular has been a major activity for TCRE. Prompted by the need for efficiency, the management of publications – stock control, methods of dissemination (hard copy and digital) is currently being evaluated. The move from external contractors to in – house stock control and distribution has not worked well. There is a clear need for a review of activity to take place and a revised dissemination strategy to be put in place under the auspices of efficiency saving. There is a balance to be struck between traditional printed output and increasingly digital delivery. An appropriate pragmatic balance between the two is important in maintaining TCRE Aims and Objectives.

TCRE has perhaps the most extensive data records in the Agency on potential stakeholders. This currently numbers around 8500 entries. A need to develop this database to interact with BRRS and to be used in pro-active outreach has been identified. Work is to be undertaken in 2008 with the assistance of Communications team in exploring electronic delivery of information promoting events, research and publications. This is a significant project but one which is considered to be important.

SMT approved a standard pricing regime for TCRE output based on fulfilling an educational role. This has proven to be popular. It is proposed to maintain this approach.

Key Questions	Education and outreach
Can we identify a need for this function ?	Yes. As the primary focus for the traditionally built environment in Scotland there is a strong need for education and outreach as it underpins the aims of the organisation. There is a widespread acknowledgement of the need for technical education from professionals to homeowners and young people. Potential for high impact.
What is the best delivery mechanism ?	Strategic targeting tailored to specific audiences. Many of these use the materials currently produced by TCRE. The Agency is expected to provide resources and leadership here. Partnership approaches key.
Future demands ?	Increased demand for accessible technical guidance as the sector becomes better educated. Education of non – professionals increasingly important. How we communicate will become more prominent (we are leading the field here). Educating young people with Education Unit through the curriculum is a key activity area.

4.5 Specialist technical advice

Specialist technical advice is given on a wide range of topics, reflecting the diversity of staff skills.

Key specialisms include ;

- Building Stone
- Carved Stone
- Ferrous and non ferrous metals
- Stone cleaning
- Lime mortars and finishes
- Windows
- Paint
- Skills
- Painted surfaces
- Fire management
- Energy Efficiency
- Carbon issues

Key audiences for this technical advice are ;

- Other Groups within the Agency.
- Local Authorities via the Inspectorate
- CHT's and THI's
- Other bodies undertaking research in the sector – SBSA, Fire Inspectorate, BRE, Higher Education establishments.

Specialist technical services are used by PIC, Policy Group and the Inspectorate and much valued. Access to these specialisms via the current system by other parts of the Agency is seen to be overly complex and over – managed however. It is generally felt that a simpler method of requesting specialist advice, and knowing what advice was available, would increase activity in this area.

The volume of consultations directed to TCRE from other parts of the Agency (largely Policy) on technical, skills and materials matters has significantly increased. This requires further resource adjustment to continue to meet these demands as the potential for positive influence is marked.

TCRE can undertake specialist advice beyond the Agency via requests for support from Policy or Inspectorate, often with local authorities or CHT's etc.. This is seen as positive by TCRE staff in retaining skills and enhancing knowledge. This role has never been particularly clearly defined. Resources could never permit a full technical service across Scotland, but there is a role for the Group where specialist technical knowledge can be provided. **This helps to build better relationships with Local Authorities.**

There is a cultural reluctance by some members of the Agency to ask for specialist advice as this is perceived as exposing a lack of knowledge. Efforts need to be made to rectify this outlook.

The Enquiry service handles around 1800 calls each year from members of the public, professionals and local authorities on a broad range of topics from technical advice to sourcing specialist contractors, general agency enquiries or finding material suppliers. TCRE maintains a database of specialist contractors and consultants known as the Building Resources Register for Scotland. The requests come from users of the service, cold callers, or are referred by Inspectors in particular. The mechanism for entry to the list is to have worked on an HS grant project or on a PIC. This does not infer endorsement in actuality but is often read as being so. To date there has been no come back from users but there is the potential of this. It is sometimes confused with a tender list held by procurement. The list is currently migrating to the HS website and it will be interesting to see evaluate the outcomes of this. It is likely that the long term future of this service needs to be fundamentally considered.

Many of the calls received by the enquiry service are general enquiries better handled by reception.

It is assumed that general technical enquiries will always need to be handled and this can be done with reasonable resource allocation within the Group. These can be useful sources of information and guided the content of the INFORM series for example. Making such information readily available makes better use of staff time.

Information on training and education opportunities is also provided and in partnership with ConstructionSkills and Scottish Enterprise. This is seen as a positive activity in the sector.

Key Questions	Specialist technical advice
Can we identify a need for this function ?	Only a national agency could maintain a depth of specialist technical knowledge and advice, and it is expected of us. The need to care for PIC's on behalf of Ministers demands this, as doe our role in caring for the wider built environment. Technical advice to Agency colleagues and wider is valued.
What is the best delivery mechanism ?	Outsourcing such specialist knowledge lacks continuity and 'corporate knowledge' for our own sites in particular. The current specialisms within the Group have been developed over a decade and are world class in many areas. There are areas where we work closely with other bodies (EH, BRE, SBSA, HM Inspector of Fire, SSLG and BGS) where joint activity is of greatest benefit.
Future demands ?	Ongoing technical advice for PIC's and technical advice to Inspectorate and Policy will continue and develop as role of Group is clarified. Increasing demand and potential role for distillation and dissemination of technical research internally. Increasing demands from local authorities and wider partners for specialist knowledge. Much potential to forge stronger relationships.

4.6 Specialist conservation services

Applied conservation services are currently provided in relation to stone and painted surfaces by HSCC. The HSCB Science Unit operationally interfaces with these staff providing scientific analysis and advice. This is a two – way relationship that works well.

The Stone Unit provides technical expertise and applied conservation to carved stone. Around 50% of staff time is spent on Historic Scotland Properties in Care. Advice to the Inspectorate and participation in other TCRE activities has diminished due to a combination of work pressures on a number of recent major projects which have stretched resources, and perhaps due to a clear strategic vision of function. The administrative downtime on technical staff is around 20%.

The Stone Unit value the independence afforded them in maintaining an overview of the PIC Estate, and enjoy a good working relationship with Conservation and Maintenance. They identify an under-use of their specialist skills and knowledge more broadly in the Agency. They are often pro-active in identifying conservation requirements in PIC's where contracted firms may not retain such a holistic duty of care.

There are opportunities for the Stone Unit to provide into research, training and education functions of the Group, but the current structure of the Group has hindered this. Applied conservation requires collaboration and close working with technical and scientific research in particular given the highly specialised nature of work. Educational opportunities to disseminate this specialist knowledge are best effected in one work area.

Painted Surfaces Unit deal with the conservation of internal painted surfaces on plaster, stone, timber and canvas primarily. Just under 50% of staff time is spent on Historic Scotland Properties in Care. The provision of specialist technical advice is an important function, and like other parts of TCRE, this extends to external parties to the specialist knowledge involved. There has been a significant move from easel paintings to other painted surfaces (partly due to the historic origins of the Unit, and also due to decreased demand).

Both Stone and Painted Surfaces Units consider that a degree of independence from PIC's is valuable in retaining a broader understanding of the subject areas, and maximising impact from their specialist knowledge. Both feel that internal Agency relationship works well although the mechanisms for requesting resource inputs from other parts of the Agency do not work well. There is a feeling that the current HSCC structure and management is over beauracatic and they feel currently dislocated from primary TCRE activity due to the current management structure. Both directly affects their output and there are serious morale issues in both units.

In consultation all staff were vocal about a desire to change operational and structural elements of their activity in relation to the Group, and to adjust their remits and activity to better engage.

In terms of resources the Stone Unit are clearly working at maximum capacity, substantiated by their internal client base in consultation, and likely to continue into the foreseeable future. There is a case for increased resources here. Increased activity in the field of laser scanning

was providing additional pressures, but regarded as a key function for the future as a shared activity with other parts of the Group. The Painted Surfaces Unit were of the view that additional resources were required, although this did not correlate with the views from clients within PIC in particular. The view from PIC in relation to projected activity was that demand for work on easel paintings was likely to diminish completely in the next year. The general view did not support the increase of resources in the painted surfaces area. Frames and heraldry work had also reduced and this prompts a re-evaluation of this function within the Group.

Both Units made a case for preventative conservation input to their activity. The PIC view was that new arrangements made to outsource this expertise were currently satisfactory and they saw no need to have this specialism in – house. It is difficult to balance this view with that expressed by the conservator team. The current arrangements are perhaps too fresh to be able to make a valid judgement on this.

There is a clear case for removing a tier of management and administration to make efficiency savings in order to extend work capacity.

There was a valid view that the conservation sector in Scotland would only thrive if elements of work were outsourced. However, on balance it is suggested that the continued pro-active provision of such applied conservation services is most valid as an in – house function due to the need for continued ‘corporate’ knowledge and duty of care. There is potential to outsource both applied conservation of stone and painted surfaces from the private sector. This would require specification and contract management in – house and a degree of specialist knowledge not readily available elsewhere in the Agency. Whether the current private sector firms in Scotland could cope with such a workload, and if this would in fact be cost effective is doubtful, and would require a significant investment of resources to establish.

A key point is that the Agency cares for some of the most important sites in Scotland. An in - house capability of leading expertise, long term working knowledge of sites and colleagues, makes more sense than contracted out packages of work which is unlikely to be able to take such a holistic and long term view. **Only an in - house team can afford to undertake the research, discussion and trials necessary to make the best conservation decisions required.**

Applied conservation work has two distinct themes in undertaking hands – on specialist work, **but also in providing specialist technical advice in conjunction and collaboration with other TCRE specialists.** This potential has been hindered by the present operational structure. The specialist knowledge of the conservator teams has not been best exploited and disseminated to a broader TCRE audience to best effect. This requires to be redressed. Whilst conservation of sites is a key priority, management of applied conservation resources needs to allow for better integration with both the research and education functions of the Group. This is a resource which has been largely untapped.

The imminent retirement of the Senior Painted Surfaces Conservator provides a useful juncture to re-evaluate the resources employed by the Group in this area.

There is potential in public and private conservators working together (Mansfield Place Church being a good example) where the specialist pool of expertise is limited. The relationship between applied conservation and building skills activity in creating educational resources in the Group must be better exploited. Graffiti removal and graveyard conservation are good examples where specialist knowledge of conservators can have a much broader conservation impact

There is much synergy and cross – over between the Stone and Painted Surfaces Units. Good synergy has developed with the Science Unit, and potential activity in terms of education and outreach Group functions are starting to emerge.

Consideration has been given to re-locating the applied conservation functions within PIC. The benefits of this were considered to be in better management of workload. In discussion with staff and ‘clients’ this was a logical notion, but not one generally supported when considered in depth. It is proposed that the functions should remain part of the TCRE structure because ;

- There is increasing integration with other specialist technical staff within the Group which is of mutual long term benefit.
- The highly specialist nature of the applied conservation elements sits best within a small focused Group who can then provide expertise to others across the Agency than having a single Group focus.
- There is much potential to use the specialist skills base for research, education and training purposes – this has not happened to any great extent previously.
- The conservators are in a better position to interface with developing technical techniques and approaches as part of TCRE, and indeed to inform these.
- The current management structure has hindered better working across the Group. Removal of this structure will allow better interaction.
- The various clients within the Agency value the services available but not the method of securing these services. The working relationship between the applied conservation functions and PIC / The Inspectorate in particular work very well.
- It is difficult for the Group to ‘preach’ if it does not ‘practice’
- A TCRE location allows for a specialist overview, informed by interfacing with external bodies and bringing this knowledge into the Agency.

Key Questions	Specialist conservation services
Can we identify a need for this function ?	The need to care for PIC's on behalf of Ministers demands this, particularly in relation to stone conservation. The need for in – house provision is driven by the need for long term and pro-active approach – a 'duty of care' not found in contracted – out services. We care for a range of world class sites demanding world-class specialist knowledge and services. There is much potential for meeting broader Group objectives not currently exploited.
What is the best delivery mechanism ?	Outsourcing such specialist knowledge lacks continuity and 'corporate knowledge' for our own sites in particular. The knowledge base and experience within the Group have been developed over time. Service provision to internal customers is best served in TCRE to enable good service coupled with access to cutting edge expertise through research and science provision.
Future demands ?	Continued demand from PIC will grow as procurement of service becomes easier. Demand of specialist services which are primarily research orientated (thermography - laser scanning) also likely to increase. Needs in other areas to be kept under review.

5.0 Contextual issues

There are a number of contextual issues against which this Review had to be set, being ;

- Stakeholder research undertaken by Historic Scotland
- Ministerial response to the HEACS report on skills and materials
- Pressures from other major research projects in relation to skills and materials (Scottish Enterprise Glasgow Project, Constructionskills Action Plan and NHTG Skills survey).

In addition, the consultation undertaken under the auspices of this review are also informative. Salient points are reproduced here.

5.1 Stakeholder Research

Historic Scotland stakeholder research published in 2004 identified the following strengths, weaknesses and observations in relation to TCRE Group ;

Strengths

- Staff are professional, enthusiastic and committed.
- Viewed as being a centre of excellence that can provide expert advice and assistance to practitioners.
- Commitment to work with others to promote skills development and use of traditional materials.
- Technical publications seen as being informative and well researched.
- Forward thinking and prepared to be innovative to find solutions to problems.
- Good at networking with other organisations.

Weaknesses

- Lack of recent practical experience for staff a weakness.
- Need for promotion to a wider audience.
- A 'purist' approach may not always translate to the real world well.
- More consultation in setting the technical research agenda required.
- The constraints of a public Agency was sometimes a barrier to innovation.
- There could be closer joint working with stakeholders at earlier stages of projects.

'TCRE is fairly isolated within Historic Scotland and perhaps does not have a great deal of influence over the work of other parts of the Agency. As a result some stakeholders felt that the Agency does not make effective use of the expertise that exists within the Group'.

5.2 Ministerial Response to the HEACS Report on Skills and Materials

Many of the actions identified by the Minister lie with TCRE to deliver against.

Repair and maintenance, materials and skills.... ‘continue to be a key activity area where it can demonstrate leadership and vision’.

Future TCRE participation in relation to the following is identified as ;

- Scottish Slate
- Building stone quarrying
- Encouraging Scottish Vernacular Building research via the Scottish Traditional Buildings Liaison Group
- Support for SSLG, SCFTE and the Ferrous Metals Liaison Group
- Support Glasgow Project activity in other areas.
- Development of other traditional skills qualifications
- Work with COTAC
- Promote benefits of accreditation.
- Maintaining commitment to Internship, Fellowship and Studentship programmes.
- Levering training from grant – aided projects.
- Support for maintenance - related activity and education.

5.3 Other recent research findings

There has been significant activity in relation to the supply of skills and materials in the last two years. The Scottish Enterprise Glasgow Project, Falling Masonry Report and the NHTG skills survey in particular have identified the need for increased activity in the fields of traditional skills and material supply. The influence of sustainability is also likely to increase pressures on TCRE here in the future as locally sourced materials and skills become increasingly understood in combating the effects of climate change.

5.4 Review Consultation

As part of the review process, Consultation was undertaken with a range of external partners and stakeholders. The questionnaire and respondents are shown in full in Appendix B.

Interviews with key stakeholders were also held.

6.0 Operational

The current operational structure of the Group is shown in Appendix C . This structure has grown organically as the activities and functions of the Group have developed with a number of minor adjustments. As indicated previously, there is a strong desire to review how this structure might better deliver more efficiently the aims of the Group in the future. The proposals put forward by staff consultees were reasonably consistent in this, better grouping areas of activity and creating a more focused delivery and management structure.

The management structure requires to be compressed and focused with clearer areas of activity, resourced appropriately. Resource re-allocation is necessary to effectively deliver the aims and objectives of the Group.

The structure is perceived to be overly top heavy in HSCC, and too flat in HSCB. Line management responsibilities in HSCB in particular require to be re-organised. There is a great deal of crossover between activities in the Group which is to be encouraged, but lack of clarity in roles has been an issue in HSCB in particular.

The administrative functions of the Group are more resource heavy than they might be due to activity being spread over three sites. The administrative support is delivered to a consistently high standard. Administrative re-organisation in HSCB (and incorporating BLO duties temporarily) has worked well.

The loss of the current BLO has provided an opportunity to critically evaluate this function. Rather than a stand - alone post, it is proposed that the BLO functions would be better served between two admin posts as a part – job function. The creation of an Operations Manager post in HSCB has worked well in collating the administrative and operational support functions for outreach and education activity. It is proposed that this approach be replicated for applied conservation. Currently three administrative staff are individually managed by the Divisional Head, which is not considered to be efficient.

Taking account of existing and emerging operational demands, it is proposed that the following will be key areas of activity for the Group in the future ;

- Scientific and technical research
- Applied conservation
- Traditional building materials and skills
- Technical Education & Outreach
- Administration & finance as operational functions

It is logical that these work areas form the basis of an operational structure. These discreet areas should also reflect a clearer operational structure in each, with more defined reporting structures.

Some areas (Science Unit) for example, which are more recent in development, have a more logical structure. Technical research management in HSCB is much too flat and reflects evolutionary growth rather than efficient delivery of objectives. In this respect job function

titles such as Project Manager / Senior Project Manager should replace current job descriptors. In creating ‘Head of’ posts within the operational framework, it becomes increasingly obvious what the primary areas of operation are within the Group and creates lead staff in each activity area.

Management and communications has caused concerns in some areas. There is a need to re-evaluate approaches to meeting scheduling and reporting in particular – this is not helped by an operational structure which is perhaps too ponderous and flat resulting in over participation in internal meetings by staff. The culture of communications and the line management structure requires to be renewed, substantiated by staff input. The general administration burden is seen as being overly burdensome across the Group and should be reviewed.

The following structural options for the Group were considered ;

1. Maintenance of existing structure.
2. Transfer of applied conservation functions to PIC.
3. Structural alteration of existing resources.

Option One of status quo is not considered viable as the current structure does not adequately meet the projected operational demands of the Group, and is not considered to be fit for purpose. There are opportunities for increased effectiveness of operation on a number of fronts.

As outlined in Section 4.6, the potential of transferring applied conservation provision to PIC (**Option Two**) was considered and on balance rejected. The negative impacts on the unit were considered to be significant **and would be of detriment to meeting the aims and objectives of the Group**. The only logical rationale for transferring the provision would be to provide more direct communication between PIC and what is currently HSCC. It is proposed that an alternative Group management structure and methodology of procuring applied conservation services and technical advice (extending beyond stone and painted surfaces) could provide for an effective ongoing relationship. PIC were comfortable with this approach providing service provision could be maintained or improved.

Option Three, structural alteration of existing resources and operation is proposed as the logical outcome of this review. A re-evaluation of the Group objectives has resulted in the need for more focused activity with more clearer defined areas of responsibility. The current structure of the Group is made more complex by a multi – Divisional structure. Removal of the existing Divisional structure and clarity of purpose relating to core areas of activity is proposed in the formation of smaller units ;

- Science and Technical Research Unit
- Applied Conservation Unit
- Traditional Building Skills Unit
- Technical Outreach & Education Unit
- Administration & Finance Unit

Delivery of activity should be retained as one distinct Group. Key areas of activity should be reflected in five units to provide focus, but all of these areas are closely inter-related and

inter-dependent. At present many of the functions considered are undertaken, but have much potential for increased clarity of purpose and driving more effective and focused delivery.

A key point is that the five units which would make up the Group are entirely symbiotic in their relationship to one another. There is a natural synergy and much cross – over between the different areas of operation.

- Science and Technical Research Unit
- Applied Conservation Unit
- Traditional Building Skills Unit
- Technical Outreach and Education Unit
- Administrative and Finance Unit

Science and technical research informs applied conservation, skills and outreach and education. In turn it is driven by the needs of applied conservation and education.

Applied conservation requires collaboration and close working with technical and scientific research in particular given the highly specialised nature of work. Educational opportunities to disseminate this specialist knowledge are best effected in one work area.

Traditional building skills work requires access to high quality technical knowledge, educational resources and delivery mechanisms, and areas of specialist applied conservation knowledge.

There is significant benefit in having these four units working collaboratively under one Group.

The structure proposed would enhance delivery of objectives by ;

Defining work areas and roles / responsibilities.

Providing clarity of purpose internally and externally to the Group.

Compressing the management overburden to increase efficiency of operation.

Collating functions previously dispersed across the Group.

Specific proposals are outlined in section 8.0.

7.0 Key Recommendations

7.1 The Group title is changed from ‘Technical Conservation Research and Education Group’ to ‘**Technical Conservation Group**’. This maintains a link back to TCRE in branding terms and effectively encompasses all areas of activity in a simpler form. The brand change to be implemented with advice from Communications team.

7.2 Objectives

The Technical Conservation Group remit should be to **enable and promote better technical understanding and care of the built environment**.

It is proposed that Technical Conservation Group should have the following key objectives ;

To inform and sustain the conservation, repair and maintenance of the built environment through ;

- **Undertaking technical and scientific research.**
- **Supporting the perpetuation and understanding of traditional building skills.**
- **Understanding and promoting the use and availability of traditional building materials.**
- **Provision of specialist technical and scientific advice.**
- **Provision of applied specialist conservation services.**
- **Delivery of technical education and outreach activity.**

These objectives align with Scottish Government National Outcomes in relation to Valuing and enjoying our built and natural environment, Research and innovation, Young people, Sustainable places, National identity, and Environmental impact. These objectives meet the aims of the Agency as laid out in the Historic Scotland Framework Document 2008 by ;

1. Caring for, protect and enhance the historic environment

Defining and encouraging the best knowledge, skills and materials to best care for and protect the historic environment. Provide specialist expertise to best inform those caring for the built environment.

2. Securing greater economic benefits from the historic environment

Encouraging sustainable development by research and education. Assisting the traditional skills and materials sector to develop and grow in Scotland. Developing specialist conservation expertise in Scotland which is world – class.

3. Helping people value, understand and enjoy the historic environment

To promote an understanding of technological aspects of the built environment and how it relates to them via skills and materials.

Specific recommendations resulting from this review are :

Technical and Scientific Research

- 7.3 A technical and scientific research strategy should be developed. This agenda will be presented to key stakeholders (internal and external) on an annual basis for input. The research agenda will actively engage with other agency activity and reflect corporate priorities and any agency research programme. Delivery of research should be a mix of in – house, collaborative and commissioned research.
- 7.4 The framework for Group research should be issues relating to ; traditional materials, building skills, technologies, conservation – repair and maintenance issues.
- 7.5 Technical issues arising from climate change will be a key research activity in the next decade - energy efficiency, embodied energy, sustainability, and renewable energy. Baseline research relating to our understanding of materials and technologies are still fundamental, and should form a key strand of the research strategy.
- 7.6 The Group should seek to maintain and extend the Agency’s international profile in technical and scientific research for the built environment sector.
- 7.7 The Group should have a function in the development and assessment of current and emerging technical and scientific developments, and translating these into practical applications. Current work in high definition scanning, modelling and thermographic analysis is a good example of this. Specialist knowledge gained should be actively disseminated to others.
- 7.8 Dissemination and delivery of the results of research should be given high priority. Good progress has been made to be at the forefront of technological advances, and this should be maintained. Dissemination should reflect the range of potential audiences. The INFORM series should be continued, and the SHORT GUIDE series extended. Short technical papers arising from specialist research should be more readily available. The management of print procurement, stock handling and dissemination of information should be reviewed to take best advantage of emerging media potential – particularly web access.
- 7.9 In – house technical specialisms and primary research should be developed in partnership with external partners such as EH Conservation Section, BGS, BRE and academic partners where practical to bring added value. Closer working with the Investment team should help to identify grant cases where added research value can be gained from agency grant aid.
- 7.10 Research activity should increasingly interface with other Government activity where there is a benefit in this. Strong links should be maintained with SBSA and HM Inspector of Fire on technical issues.
- 7.11 The Research Fellowship and Studentship route are good value and should be maintained and developed. Research Internships should be re - focused on specialist scientific research relating directly to the built environment.

Traditional skills

- 7.12 The role of the Group should be strategic, primarily one of facilitator in relation to traditional building skills, with intervention relating to specialist building craft skills only where they are unlikely to be supported through mainstream training. The primary mechanism for this is likely to be the Craft Fellowship model which should be maintained and extended in partnership with others. This should be a key area of activity for the Group.
- 7.13 The Sector Skills Agreement with ConstructionSkills is a key mechanism to raise the profile of the conservation, repair and maintenance sector and should be fully utilised. Skills are becoming an increasingly important part of funding applications to both Investment team and HLF. The Group should build on the existing relationships here.
- 7.14 Identification of traditional building skills gaps and facilitating the development of qualifications and resources is both strategic and highly successful, as found with the NPA in Masonry Conservation. This methodology should be continued in partnership with ConstructionSkills, Scottish Enterprise, The Skills Agency and industry / training providers. Resources should be allocated to developing training and education materials for traditional skills.
- 7.15 The Group has a commitment to deliver the HLF Bursary Scheme in Masonry Conservation with a range of partners including Scottish Enterprise. This project has increased in scale and profile. This should be maintained and considered as a model for other traditional trades.
- 7.16 Networks such as the Scottish Conservation Forum for Training and Education are important in ensuring a national approach and should be supported. Mechanisms for more meaningful participation by members should be developed.
- 7.17 The development of teaching resources from existing and future research has potential for significant impact. Learn Direct and Build should be key partners in this delivery.

Traditional Materials

- 7.18 The Group should continue its research into understanding traditional materials in relation to sourcing, use and conservation, repair and maintenance. It should maintain and develop its international expertise in stone, painted surfaces, fire and metals in particular.
- 7.19 It should facilitate the study of traditional materials through the Scottish Traditional Building Materials Working Group.
- 7.20 It should increasingly interface with other Agency colleagues to ensure a consistent approach in areas relating to traditional materials.
- 7.21 It should continue to support the Scottish Stone Liaison Group and work with British Geological Survey. These should be considered key partnerships.

- 7.22 It should work to understand, identify and promote the need for traditional building materials, **without interference** in the commercial sector.
- 7.23 Key areas of activity are proposed in relation to dimensioned building stone and slate. Other areas of activity should consider vernacular materials and metals.

Technical Education and Outreach activity

- 7.24 Dissemination mechanisms should be reviewed and a strategy developed taking account of both new and existing techniques and mediums.
- 7.25 Key audiences are those involved in technical aspects of caring for the built environment, particularly building professionals. Broader outreach to traditional building owners is more challenging, but nevertheless important. Outreach to Local Authorities should be a key priority and the Group should continue to work closely with the Inspectorate in this regard. The Group should also have a more formal role in the provision of technical seminar programmes in – house to develop and inform staff of current thinking in specialist areas. This should be taken forward with Training and Development Unit.
- 7.26 Short one day seminars on specialist topics are now easier to deliver economically and are to be encouraged.
- 7.27 Increased activity and resources in relation to curriculum – based activity should be pursued with PIC Education Unit and Learning and Teaching Scotland. This is a key area previously neglected.
- 7.28 The Group should maintain the Agency profile at public events such as the Homebuilding and Renovating Show, continuing to involve other parts of the Agency where appropriate.
- 7.29 The Resource Centre is an asset best managed by the Group, and should continue to develop specialist collections through publication exchanges and international collaborations. It should no longer have the research function it has presently. It should have a clear role in collating specialist technical material to support agency activity.
- 7.30 The enquiry service should be routed via reception and only technical enquiries or requests for register information passed on. This will require some discussion with OST. The register should be migrated to the HS website and its usage evaluated after 6 months. At this stage it is proposed that the service becomes web only or stopped. The training resource is useful and should be maintained. A technical enquiry service should also continue to be resourced by the Group on behalf of the agency.
- 7.31 The Group should continue to encourage its staff to present research findings and disseminate knowledge at a variety of levels – from academics to schoolchildren. Electronic communication and exploiting existing networks should be developed.

- 7.32 The existing small grants scheme should be reviewed with advice from Investment team in Policy Group to make the scheme more focused and easier to access. The scheme should focus on offering grant assistance relating to core Agency activity in relation to the built environment, building skills and traditional materials.

Specialist technical and scientific advice

- 7.32 The Group should have a key role in providing **specialist** technical and scientific advice to other parts of the Agency, and to partner organisations such as NTS, CHT's and Local Authorities where resources permit . The mechanism for procuring this service internally to be simplified and allow Unit Heads a greater deal of autonomy in managing this activity.
- 7.33 The Group needs to better explain to internal colleagues what services are available as these have moved on considerably in recent years. This is likely to prompt increased demand, and senior managers should be prepared to manage expectations.
- 7.34 Scientific research and advice should be sound and based on production of advice for practical application. Developing arrangements for sharing equipment with other public bodies (NMS and Universities) is logical and efficient. This should be encouraged.
- 7.35 Consideration should be given to technical requests from external partners such as NTS to extend the specialists knowledge base, take advantage of different building portfolios. It also extends our portfolio for live research projects.
- 7.36 The Group should be aware of specialist technical knowledge elsewhere in the Agency, and SMT should consider how secondment opportunities might be used to make best use of this technical expertise in a more corporate way.

Applied specialist conservation services

- 7.37 Applied conservation of stone should remain a primary activity in the Group. Opportunities to exploit applied conservation work to increase understanding by others should be actively encouraged. Mechanisms to develop expertise on a broader range of subjects outside PIC's should be considered. Work in practice should be better taken advantage of to inform best practice, education and outreach activity and a balance struck to extend the impact of the specialist expertise by participation in educational activity.
- 7.38 The demand for conservation of painted surfaces is not likely to be sustained at previous levels, although it is important to retain the in – house capability in this area. This should be reflected in how the unit is resourced against other pressures. It is proposed to reduce resource allocation here.
- 7.39 The need to have specialist in – house conservation services should be reviewed on an ongoing basis, and potential gaps in Group provision evaluated.

- 7.40 The provision of preventative conservation services via a staff post is not considered a priority at this time. This should be kept under review with respect to the recommendation above.

Administration

- 7.41 Given the Group operation over three sites, it is logical to have two Operations Managers in the Group – one for Longmore House, and one for Stenhouse and South Gyle. The BLO duties of the Group should be led by the Longmore House Operations Manager, with support from the satellite Operations Manager.
- 7.42 A re – structure of admin provision is proposed to better suit future operational needs.

8.0 Delivery – structure and function

8.1 The existing Group structure is no longer fit for purpose. The currently divisional structure (HSCC and HSCB) should be removed and the management of the Group compressed. Areas of responsibility should be more clearly defined.

8.2 A single Group titled **Technical Conservation Group** should be formed to create a more focused and compressed operational and line reporting system.

Key areas of activity should be collated into five units ;

- **Science and Technical Research Unit**
- **Applied Conservation Unit**
- **Traditional Building Skills Unit**
- **Technical Outreach & Education Unit**
- **Administration & Finance Unit**

8.3 Each unit should have a Head at Grade E reporting to the Group Head (G) with the exception of the Head of Technical and Scientific Research at Grade F due to the nature and profile of work involved. Unit heads will have responsibility for delivery of work programme and effective management of resources – staff and budget.

8.4 Lines of communications need to become clearer between Group Head, senior managers and other staff. Overly burdensome administration procedures should be reviewed to facilitate greater focus on achieving objectives.

8.5 Unit Heads should work to ensure effective communications given that the Group works across three locations.

8.6 Management and operation of the Resource Centre should transfer to Administration Unit in Longmore House.

8.7 A new delivery framework is proposed in the organisational chart shown in Appendix D.

9.0 Resource implications

Please refer to the proposed structure chart in Appendix D.

9.1 The structure proposed requires the removal of the following posts ;

- The two current Divisional Head (F) posts
- The Resource Centre Manager (C) post
- The Head of the Painted Surfaces Unit (E) post
- The BLO (C) post

9.2 An additional stone conservator posts should be created in the applied conservation unit to meet current and future work demands, and the current heraldry and frames post moves to the Science Unit to support research activity, in particular HDS scanning.

9.3 One new post to be created in Skills Development Unit to accommodate significant existing and projected demands in this area. A Head of Science and Technical Research post is created at Grade F, and a Head of Outreach and Education post created at Grade E.

9.4 The following to be job evaluated due to role changes ; Snr Technical Officer, Admin (Applied Conservation). The former full time PS role to Group Director is made part time, with other admin duties relating to increased admin functions picked up.

9.5 Recruitment is required for the following posts ;

- Group Head (G)
- Head of Science and Technical Research (F)
- Head of Education and Outreach (E)
- Stone Conservator (D)

9.6 Compared to baseline staffing costs 2007 – 08 under the current structure, the following are given as indicative costs ;

2007-08 Staffing structure at band max :	£1,278,565
Proposed structure at band max :	£1,229,059
Cost saving ;	£49,505 min

Appendix A

Project Initiation Document Summary

PROJECT SCOPE

The best value review will examine both the structure and functions of TCRE.

The review will examine and in examining the following issues, the review should consider the scope for delivering best value and efficiency savings:

- What are TCRE's current objectives and what outcomes are they designed to deliver (including meeting the needs of its customers) ?
- What are the functions currently carried out by TCRE to deliver these objectives and outcomes?
- Do these functions need to be carried out at all (in other words, can we stop doing any or all of them)?
- For each of the functions where there is a continuing need identified, what alternative delivery mechanisms (either internal or external), if any, are options?
- What are the appropriate staffing structures for those functions recommended for continued in-house delivery?
- Are there any additional functions which should be carried out to ensure delivery of TCRE's objectives and outcomes?

Appendix B

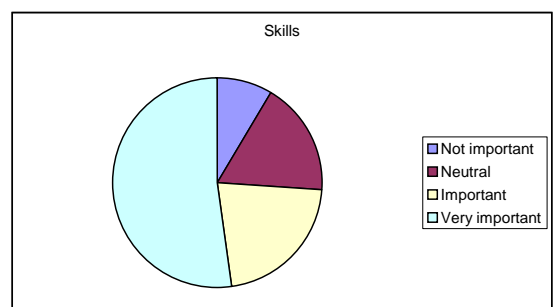
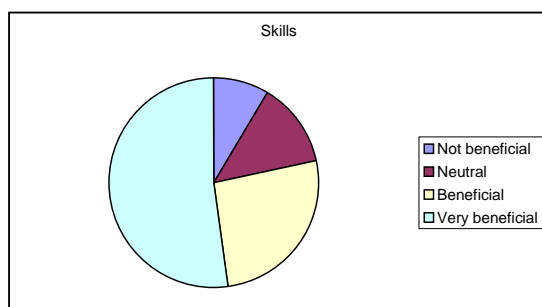
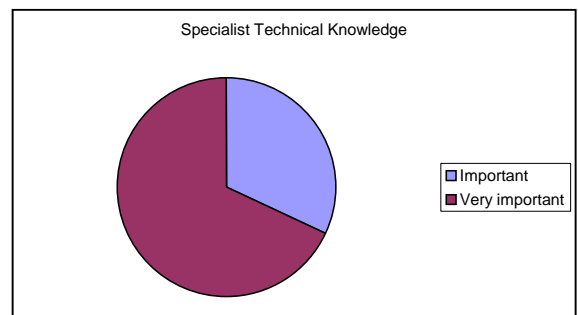
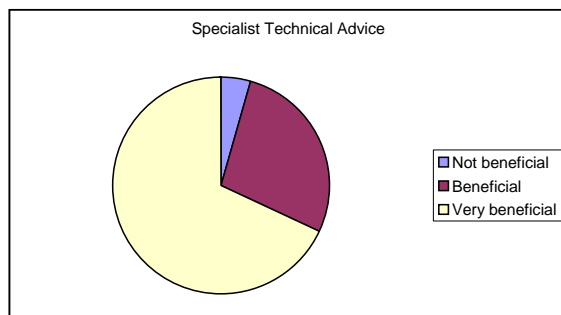
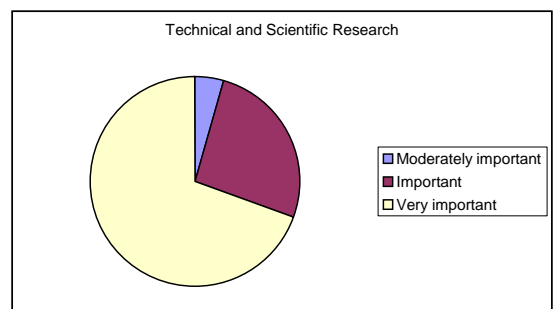
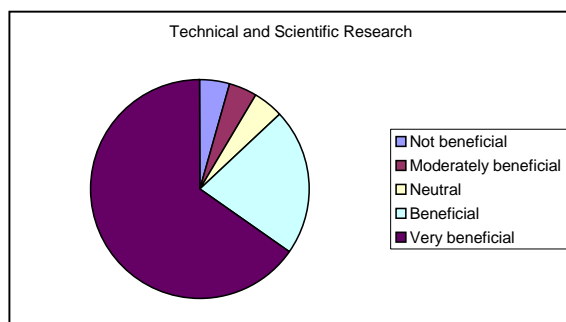
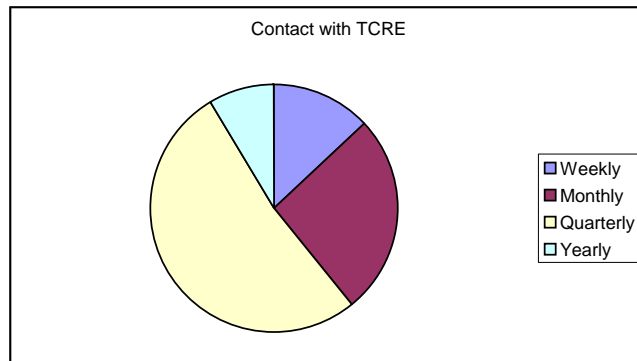
TCRE Review - survey respondents

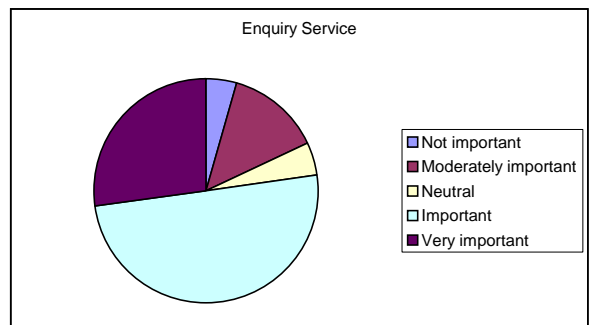
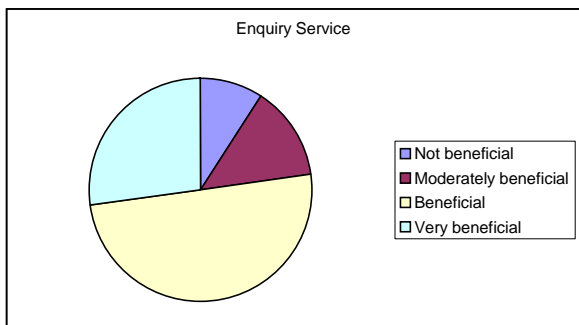
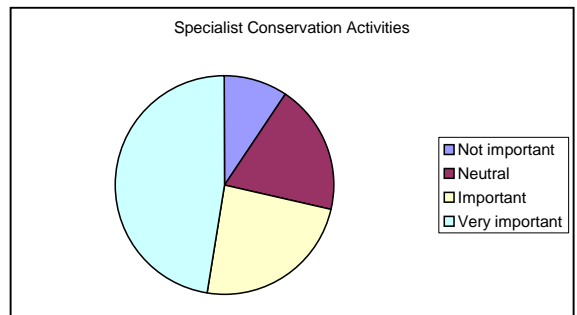
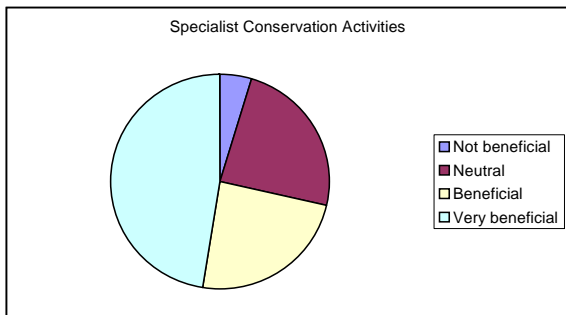
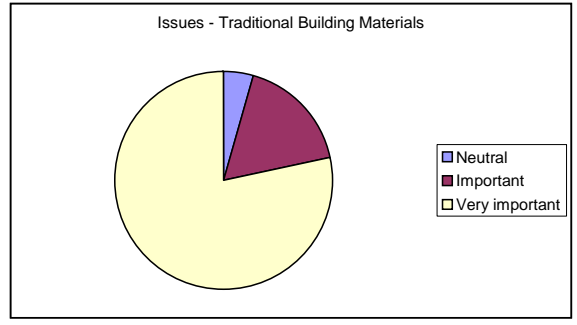
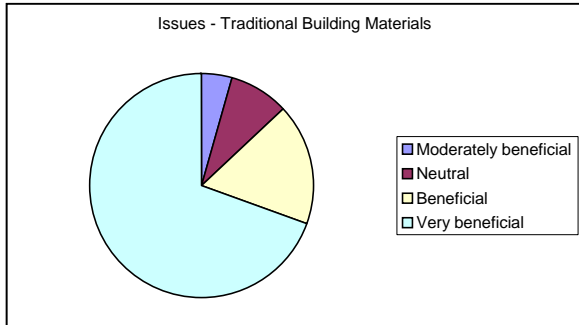
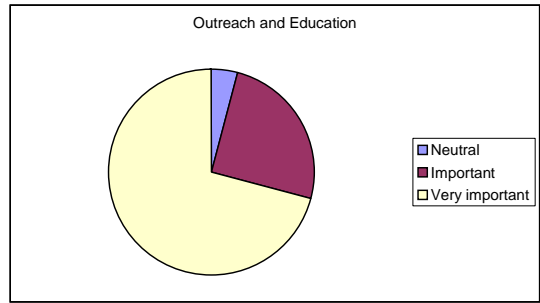
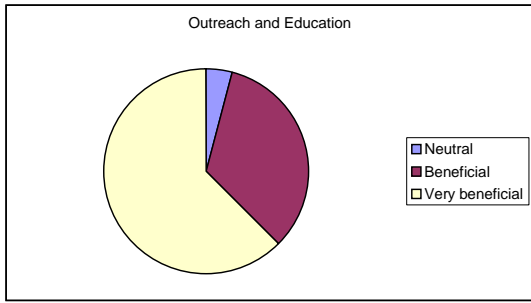
Douglas Campbell	Aberdeen City Heritage Trust
Clare Meredith	National Trust for Scotland
James Simpson	Simpson and Brown
Ben Tindall	Benjamin Tindall Architects
Murdo Macleod	Edinburgh City Council
Mark Douglas	Scottish Borders Council
Miles Glendinning	Edinburgh College of Art
Thomas B Wilson	Glasgow Metropolitan College
David Narro	David Narro Associates
Bob Shanks	Highlands and Islands Enterprise
John Sinclair	Allen, Gordon & Co
Miriam Frier	Orkney Islands Council
David L Spence	Carnegie College
Jim Mitchell	Architectural Policy Unit, Scottish Government
Rachel Haworth	Perth & Kinross Council
Jocelyn Cunliffe	Gray, Marshall & Associates
Fionn McIntosh	Stirling Council
John Gerrard	Churches Working Group on Church Building Maintenance
Robin Kent	Robin Kent Architecture & Conservation (Robin Kent Ltd)
Colin Tennant	Scottish Stone Liaison Group
Monika Thomson	Renfrewshire Council
Jacky MacMillan	North Highland College
Jenny Kellie	Learn Direct & Build
Janice Miller	East Dunbartonshire Council
John Taylor	COTAC
Bryan Dickson	National Trust for Scotland
Torsten Haak	Glasgow City Heritage Trust

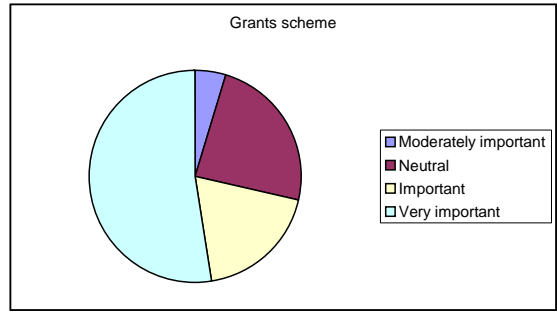
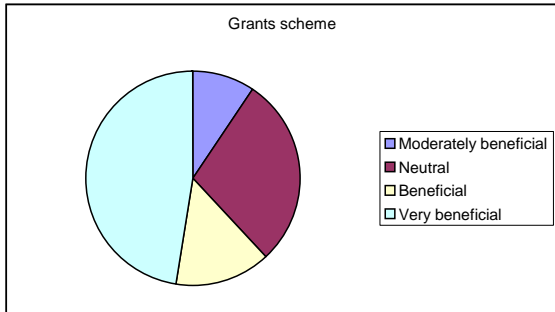
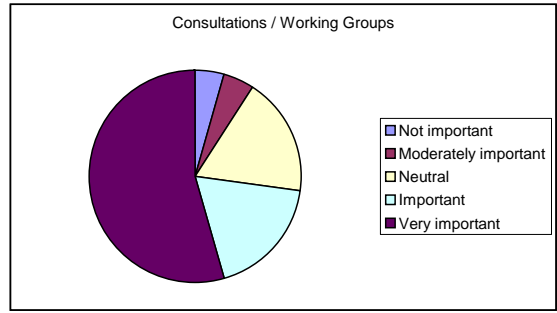
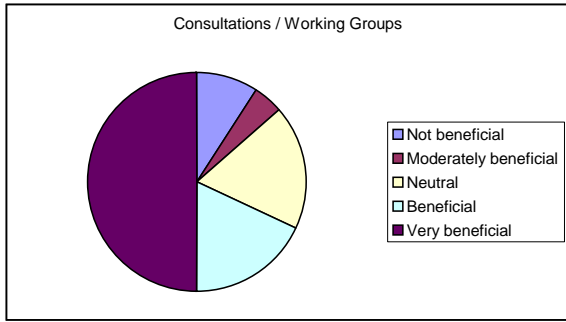
Interviews were held with ;

Director PIC
Head of Conservation and Maintenance, PIC
Education Manager, PIC
Collections Manager, PIC
Inspectorate Senior Managers
Director, Policy Group
Head of Investment Team, Policy Group
All TCRE staff in working groups
HSCC Division Head
Chief Executive, SSLG
Principal, Glasgow Metropolitan College
Head of Buildings , NTS
Director of Constructionskills Scotland
Highlands and Islands Enterprise

Consultation Outcomes

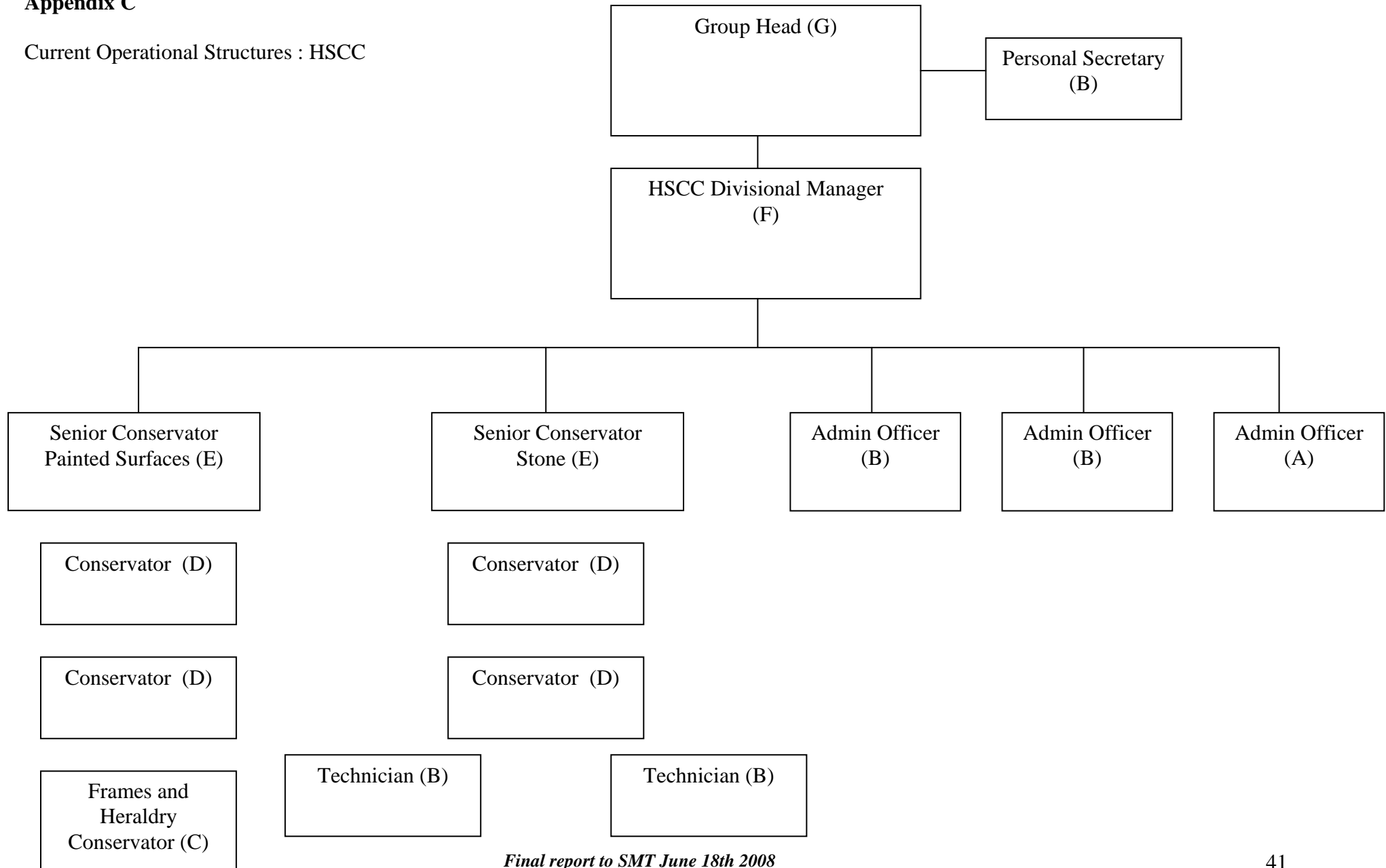




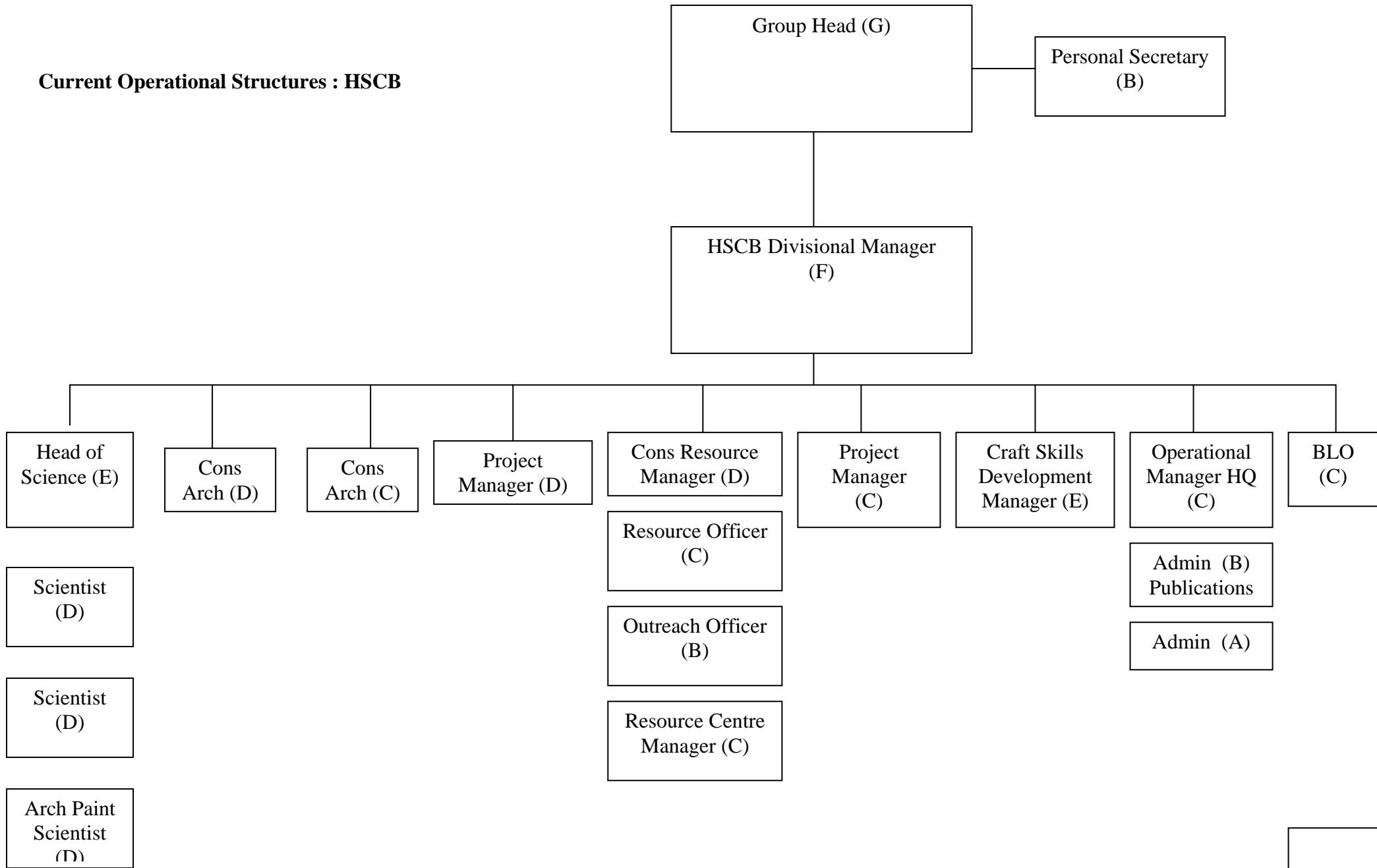


Appendix C

Current Operational Structures : HSCC

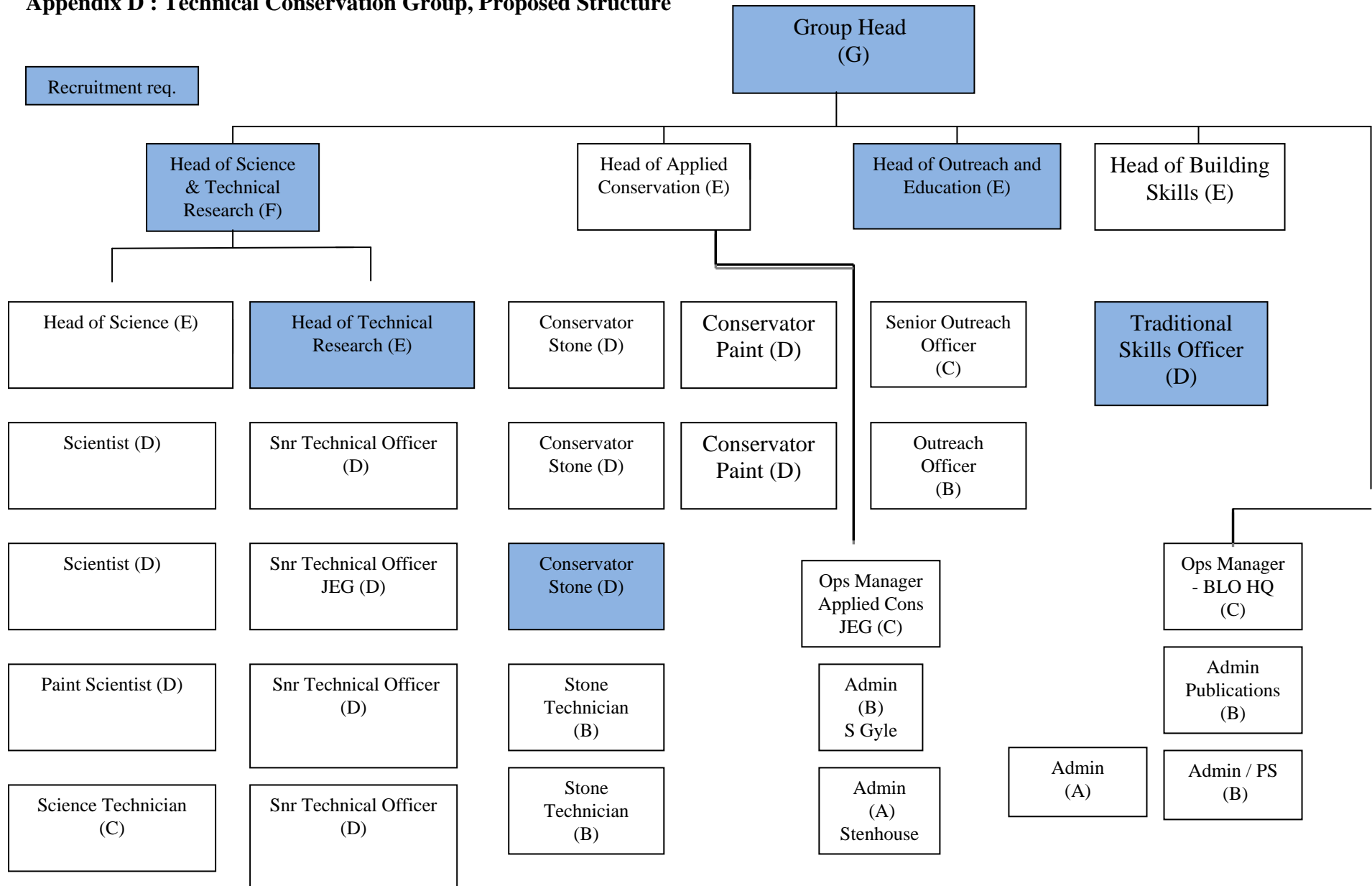


Current Operational Structures : HSCB



TCR
Div

Appendix D : Technical Conservation Group, Proposed Structure



Appendix E : Outline role descriptors for senior staff

Role	Outline	Grade
Group Director	Discretion of the Chief Executive. To include delivery of Group objectives in relation to the Corporate Plan. Provide advice to Scottish Ministers. Strategically manage the work of the Group and represent the Agency relating to areas of activity. Effectively manage resources.	G
Head of Science and Technical Research	Depute to Group Director. To strategically develop, plan and deliver the Group scientific and technical research programme, managing staff and budgets set against set programmes. To represent the Agency on areas of scientific and technical research, and build strategic research partnerships with external and government partners. To provide advice to Scottish Ministers and Agency colleagues. Production of research outputs in a variety of formats.	F
Head of Science	To deliver the scientific research programme, managing staff and budgets set against programmes. To provide advice to Scottish Ministers. Provide specialist advice to other parts of the Agency. Manage Research Studentship Programme.	E
Head of Technical Research	To deliver the technical research programme, managing staff and budgets set against programmes. To provide advice to Scottish Ministers. Provide specialist advice to other parts of the Agency. Manage Research Fellowship Programme.	E
Head of Applied Conservation	To manage the applied conservation service provision in stone and painted surfaces conservation. Provide specialist advice in stone and painted surfaces to other parts of the Agency. To contribute to the scientific and technical research programme. Manage staff and budgets set against work programme.	E
Head of Technical Education & Outreach	To manage the technical education and outreach provision for the Group, managing staff and budgets set against programmes. Develop, manage the conference and seminar programme, networking with external partners. Work with PIC Education Unit in technical education at curriculum level. Manage enquiry service and outreach activities at public events. Work with Head of Building Skills to develop and deliver educational material relating to skills. Manage small grants programme.	E
Head of Building Skills	To manage Group activity in relation to traditional building skills. Manage staff and budgets set against programmes. Deliver HLF / Skills Agency Masonry scheme. Work with Construction Skills Scotland to deliver against Sector Skills Agreement. Network and develop strategic partnerships to raise standards of traditional skills. Work with others to develop qualifications and take up in the FE sector. Manage HS Craft Fellowship Scheme.	E

