

Chapter 2

The research and development tax relief framework

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2.1 The research and development tax relief framework

SIGNPOSTS

- **Basis** – The UK’s research and development (R&D) tax relief framework is based upon five separate strands of legislation. It is necessary the company’s project meets each aspect of this ‘code’ as no ‘partial’ relief is available (see 2.1–2.7).
- **Scope** – The code applies to both small and medium enterprises (SMEs) and large companies. Further additional rules in *CTA 2009, Pt 13* apply to each R&D scheme (see 2.7).
- **‘Accounting’ definition of R&D** – The accounting definition of R&D provides a starting point for a claim to relief. These principles are tailored by the Department of Business, Innovation & Skills (BIS) definition of ‘R&D’. Many further accounting issues are common in R&D companies, including the identification of ‘capital’ expenditure (see 2.1–2.4).
- **‘Tax purposes’ definition of R&D** – The BIS Guidelines provide the foundation definition of ‘when’ R&D takes place. These supplement but do not override the tax legislation at *CTA 2009* and contain a number of detailed terms which must also be considered (see 2.1–2.6).
- **Amount** – The amount of R&D relief depends upon identifying the ‘boundaries’ of eligible activity; the rules of *CTA 2009, Pt 13* are then applied to this ‘envelope’ (see 2.7–2.8).
- **Influencing factors** – Commercial factors influencing the project may impact upon the relief due. This is particularly relevant for SMEs where activity is ‘subcontracted’ but also affects large company reliefs (see 2.8).
- **Effect of grants and subsidies** – Grants and subsidies, ‘State Aid’, can affect the reliefs due – this is especially relevant for SMEs (see 2.8).
- **Code to be followed strictly** – R&D case law shows that unless the code is followed meticulously, no relief at all may be due. Meeting the definition of R&D for tax purposes alone will not guarantee relief is due (see 2.2 et seq).
- **‘Frascati’ model** – The R&D ‘Frascati’ model is adopted by the EC/OECD and is based upon a broader definition of activity and eligible costs than the UK. This model is also used for many grant framework programmes, meaning there is no assumption of tax relief from viable grant applications (see 2.33).

SUMMARY/KEY POINTS

2.1 Claiming R&D tax relief (RDTR) in the UK involves the consideration of five different strands of legislation which effectively make up a ‘code’ for the

relief. The company must comply with each of these statutory requirements, and the claim process can fail at any point. Following the changes in *FA 2013*, the UK R&D Scheme comprises six schemes of relief which are codified at *CTA 2009, Pt 13, Chs 1–9*. A successful claim under any scheme will depend upon each of these requirements being met.

This chapter considers each of the milestones which make up the relief's framework. A competent claim will need to follow and document this methodology. The BIS Guidelines' definition of R&D for tax purposes is separately discussed, both because of its importance and because of its extensive nature. Clearly, the definition of R&D for tax purposes is at the heart of a claim to relief and the identification of the eligible project work and its related costs. But meeting this definition alone is insufficient and it will not necessarily follow that any tax relief will be due. The definition of R&D for tax purposes is discussed separately at **Chapter 3** below.

FRS 102: The new UK GAAP

2.2 The first condition for relief is that the company's accounts fulfil the generally accepted accounting principles (GAAP) definitions of R&D. The UK Accounting standards were written in 1989 and have been rewritten for accounting periods beginning on or after 1 January 2015. The shift away from current UK and Irish GAAP will require all entities (except those small enough to use the Financial Reporting Standard for Smaller Entities (FRSSE)) to report in accordance with FRS102 or IFRS. FRS102 is a self-contained standard of 35 chapters based on the IASB's IFRS for SME's addressing all of the recognition, presentation and disclosure requirements for entities using this standard.

The new UK financial reporting standards address and consolidate a range of technical issues linked to the previous accounting standards. There is an obvious impact upon R&D accounting policies, particularly for large companies. The UK's Financial Reporting Council (FRC) recently published five standards which together form the basis of the new UK regime. The FRSSE has been withdrawn and small entities brought within the scope of FRS 102 – the reader can see more at: <http://www.icaew.com/en/technical/financial-reporting/new-uk-gaap#sthash.mIFxHhrT.dpuf>.

UK Accounting Standards have always been influenced by international factors. In the early days of RDTR, and following a move towards the adoption of International Accounting Standards (IAS), the UK followed the EU and introduced special legislation to remove any barriers to companies claiming RDTR for eligible R&D expenditure that has been capitalised in accordance with IAS or other accounting policies.

RDTR is limited to revenue expenditure. Capital expenditure has no special definition for R&D tax purposes other than the prevalent 'enduring benefit' tests established through the courts over the past 120 years. Enhanced capital

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allowances are available for plant and equipment used in R&D activity. These are called ‘Research Development Allowances’ (RDAs) and an outline is at **Chapter 8** below.

Assuming GAAP/FRS 102 compliant accounts are in place, the definition of R&D for tax purposes, published in the BIS Guidelines, should then be considered. This is much narrower than the Accounting Standards’ definition of R&D. Two ‘Gateway’ tests must be met. This requires both a scientific or technological advance and technical uncertainty to be present in the company’s project work. The nature of a technical ‘advance’ is extensive and can include most R&D activity irrespective of the type of company or its size.

The company must then identify activity ‘directly contributing’ to the technical advances and uncertainties within the project work. Whilst this fourth requirement is strictly part of the BIS Guidelines framework, it is drawn out as a separate part of the framework to reflect both its importance and because case law shows that without documentation of the R&D boundaries, a claim will not be competent.

The specific rules of the scheme of relief to be claimed can then be considered. Different rates of relief apply to the SME and large company schemes. Six different relief schemes are available in the legislation, depending upon company size and whether or not the R&D is performed on behalf of others or is subsidised.

The schemes’ rules focus upon the identification of costs which are eligible for relief. These apply equally to both the SME and large scheme reliefs. Further detail on each scheme is discussed at **Chapters 4** and **5** below. A project can potentially include claims to relief under more than one scheme.

HMRC’s approach to the legislative framework is published in their Corporate Intelligence Research & Development Manual (CIRD). Tax cases relevant to R&D have shown that the relief framework must be followed ‘meticulously’. For example, the cases of both *BE Studios Ltd v Smith & Williamson Ltd* [2005] EWHC 1506 (Ch) and *Gripple Ltd v HMRC* [2010] EWHC 1609 (Ch) show no purposive construction of the legislation is possible.

2015 First-tier Tax Tribunal decisions have gone against several of the approaches and premises outlined in the HMRC guidance. This, and the absence of an Appeal, is interesting and reinforces the key interpretative nature of the relief legislation. With significant tax-gearred penalty powers at their disposal, the HMRC interface requires very careful consideration of the UK R&D legislation.

HMRC have overall responsibility for administering the R&D claim framework. The long-term statistic is that fewer than 25% of eligible UK companies receive the R&D relief to which they may be entitled. Although 2015 has seen a record number of R&D relief claims, this has not kept pace with the dramatic rise in R&D companies operating from the UK’s Science and

Technology parks, Tech Hubs, Innovation centres, etc. There are a number of reasons for the low engagement and the complexity of the relief is a common criticism. This chapter and **Chapters 3** and **4** try to navigate the legislation providing an accurate and competent methodology for a claim.

The international R&D environment, where the Organisation for Economic Co-operation and Development (OECD) follows the Frascati Model for R&D activity, provides some context for the UK framework. R&D is often an international activity with variant definitions. The UK definition does not follow US or OECD codes but has its own multi-faceted framework. Similarly, the UK grant and alternative funding for R&D use again differing definitions of R&D and relevant costs.

BACKGROUND: THE R&D TAX RELIEF FRAMEWORK

The 2016 position, post-FA 2015

2.3 The UK R&D framework is complex and requires the satisfaction of a number of definitions in addition to the mainstream tax legislation. Some of these apply equally to both SME and ‘large’ scheme claimants. Others depend upon the rules of the relevant scheme through which relief is claimed. It is useful to approach R&D as a ‘multi-discipline’ analysis and to bear in mind its international context.

The current day SME and large company schemes were introduced by *FA 2000, Sch 20* and *FA 2003, Schs 1–6 and 11–20*. The Vaccine Research Relief Scheme (VRR) was introduced by *FA 2002, Schs 13 and 14*, coming into effect from 22 April 2002. The VRR Scheme is discussed briefly at **Chapter 5** below. The mainstream SME and large schemes are the subject of this and subsequent chapters.

The current R&D legislation is contained within *CTA 2009, Pt 13*. The CTA provisions account for only one of the five statutory requirements making up the UK relief framework and take precedence over their counterparts. The CTA provisions provide for R&D relief to be given under more than one Chapter of *Pt 13*. Following the enactment of *FA 2013*, the R&D tax relief schemes now available are as follows:

SME relief upon in-house direct R&D and contracted out R&D	Chapter 2
SME relief for R&D work subcontracted to the SME	Chapter 3
SME relief for subsidised and capped R&D expenditure	Chapter 4
Large companies relief	Chapter 5
R&D expenditure credits*	[New Chapter 6A]

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(*Available to both SME and large companies)
mandatory from 1 April 2016

Relief for SME and large companies conducting vaccine research Chapter 7

Supplementary provisions and key definitions for all schemes Chapter 9

Company requirements

2.4 R&D tax relief applies only to companies within the scope of UK corporation tax which meet the following additional conditions:

- The company is a going concern (SME scheme only).
- Total aid to the R&D project is below €7.5m, and for SME companies, no notified State Aid has been received for the project concerned.
- For expenditure before 1 April 2012, the company's costs upon its project work exceeds £10,000 and for accounting periods ending before 9 December 2009, that intellectual property vests with the claimant.

SME companies must also comply with EC 'State Aid' requirements which are discussed further in **Chapter 4**.

Relief framework – key conditions

2.5 The relief framework depends upon the company satisfying six key requirements. UK RDTR comprises these strands of legislation:

- 1 FRS 102/[GAAP: *SSAP 13*]: To arrive at the definition of R&D for tax purposes, the legislation looks first at those activities described as such within GAAP (*FA 2000, Sch 20, para 25(1)*). This mirrors the *Income and Corporation Taxes Act 1988 (ICTA 1988), s 837A* which confirms that the beginning point of an R&D claim is the identification of those activities that are treated as R&D in accordance with GAAP; the relevant UK accounting standard is *SSAP13*. For companies adopting International Accounting Standards, the relevant standard is *IAS 38*. FRS 102 provides the reference point for accounting periods beginning on or after 1 April 2015.
- 2 Revenue expenditure: R&D tax reliefs are only available for 'revenue' as opposed to 'capital' expenditure. This was expressly stated at *CTA 2009, s 87* but the requirement disappeared from the rewritten CTA provisions. The default position is that no trading deduction is possible for capital expenditure (*CTA 2009, s 53*). As the relief works by providing an enhanced deduction for revenue expenditure, it follows that capitalised expenditure is ineligible. As is customary with tax legislation, there is an exception available in some circumstances. Relief is still feasible for

expenditure forming part of the value of the company's intangible assets, in accordance with a specific accounting standard.

Relief is also possible for costs representing deferred expenditure asset (expenditure). This is only available when the costs are released to profit and loss and derecognised from the company's balance sheet.

- 3 The company's project activity must meet the definition of R&D for tax purposes. The definition is set out in a publication issued by the BIS: Guidelines on the Meaning of Research and Development for Tax Purposes (March 2004, updated December 2010). Foremost, R&D must be arranged as a systematic project targeting technical uncertainty. The definition embraces a number of key requirements. The starting point is that the company's work meets the 'Gateway tests' of 'advance' and 'uncertainty'. This is distinct from simply improving the company's own technological competence.

The current Guidelines replace guidance issued by the Department of Trade and Industry (DTI) in 2000 and were published on 5 March 2004 (*Finance Act 2004, Section 53 (Commencement) Order 2004 (SI 2004/3268)*) and updated in December 2010.

- 4 R&D relief rewards only those project activities which 'directly contribute' to the technical advances and uncertainties within the company's project work. This requirement features both within the BIS Guidelines (para 6) and throughout the detailed terms of the relief schemes at *CTA 2009, Pt 13*. The R&D boundaries are identified by isolating those activities making a contribution to the resolution of technical uncertainty. The boundaries will confirm the start and end points for the collection of relevant project costs. It follows that once technical certainty is achieved, the cost collection will end. This can be a circuitous process, particularly in the forefront of R&D activity and it is common to see one set of uncertainties give rise to a set of further and more complex uncertainties. Those Phase II costs will form part of the same project or may migrate into a different separate project.

Indirectly contributing activity attracts R&D tax reliefs where there is a clear link into the project administration, objectives or resource planning. Common examples are Human Resource and Financial Control expertise to manage or support project progress.

- 5 The detailed scheme rules of *CTA 2009, Pt 13* must be applied. Most companies will claim relief under one Chapter, but reliefs are potentially available under more than one scheme. The extent of this will depend largely upon the commercial context of the project. This is often exploited by SME companies claiming relief for subcontracted activity, but can be relevant where the company cannot meet the 'going concern' test at *Ch 2* or has exceeded the project cap.

Finance Act (FA) 2015 has built upon the large company 'cash' reliefs for R&D introduced in 2013. *FA 2013* introduced an 'above the line' R&D expenditure credit (RDEC) in response to long-running concerns

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with the usefulness of the tax relief scheme available to large companies. Early statistics show that this has had a very positive impact with loss-bound large companies at last able to obtain relief ‘above the line’ as part of their ordinary accounting procedure.

The rules of the RDEC scheme are stringent and detailed but provide a visible and easy-to-calculate incentive.

- 6 Finally, HMRC apply the above R&D tax relief ‘code’ and the detailed requirements of each scheme rigorously (see **Chapter 6**). The documentation supporting the R&D relief claim will need to demonstrate:
- eligible project activity and its boundaries and milestones;
 - eligible project costs;
 - commercial influences such as how the R&D is performed and whether it is independently funded or subsidised;
 - the proper engagement of subcontractors, externally provided workers and other third parties.

CURRENT ACCOUNTING DEFINITIONS OF R&D

2.6 To qualify on a preliminary basis as R&D, the company’s activities must fall to be accounted for as ‘R&D’ under GAAP. This is ‘Condition 1’ of the relief.

Condition 1: Accountancy definitions – UK GAAP/FRS 102

2.7 The UK accountancy definitions of R&D differ from the BIS Guidelines. As the latter is used to define eligible activity for tax purposes, it follows that the presentation of expenses in a company’s accounts as R&D does not necessarily mean an automatic entitlement to relief.

The accountancy treatment differs in a number of key respects. For example, neither the *SSAP 13* definition of R&D nor the *IAS 38* principles requires an ‘advance’ in scientific or technological knowledge to be present. However, if no advance is sought from project work, the BIS Guidelines show that the work will not be regarded as R&D for tax purposes.

Equally, HMRC inspectors are encouraged not to regard the absence of an R&D disclosure in the company’s accounts, as meaning an absence of qualifying R&D activities. The requirement is that the activities fall to be accounted for as R&D, whether or not they are actually disclosed as such in the company’s accounts. *SSAP 2* enables a company to report accounting information in whichever way is appropriate for them. The move to ‘above the line’ tax credit will still leave the relief ‘invisible’ for most SMEs and companies using the legacy large scheme prior to April 2016.

UK GAAP/FRS 102

2.8 SSAP 13 provided the UK standard for accounting for R&D activity. It provided a preliminary outline of the meaning of the term 'R&D' for accounting (rather than tax) purposes. The standard also provided a useful introduction of key concepts which are given special meaning by the BIS Guidelines when formulating the tax definition. These terms include 'project', 'uncertainty', development and research.

The standard defined three categories of research and development costs – pure research, applied research and development. In this way the GAAP definition of R&D distinguishes between pure and applied research. Pure research being undertaken purely for its own sake, applied research being undertaken for a practical aim or to gain new technical knowledge.

Development is regarded as the practical use or exploitation of scientific or technical knowledge. This is usually undertaken to develop new products, processes, systems, or to fundamentally change existing products, processes or systems.

SSAP 13 introduced the presence of an 'appreciable element' of innovation in product development work. For a product to be regarded as R&D, it should depart significantly from routine improvement or enhancement to 'break new ground'. This would exclude from the definition of R&D, development work aimed at producing simple, readily deducible improvements. This theme is developed within the tax definition by the BIS Guidelines.

The GAAP definition was useful only as a preliminary to the definition of R&D for tax purposes which is contained within the BIS Guidelines. For example, para 4 of the UK standard gets at the hallmark of most R&D analysis:

'The dividing line between these categories (of research, applied research and development), is often indistinct, and particular expenditure may have characteristics of more than one category.'

(SSAP 13, para 4)

The new FRS 102, transitional from 1 January 2015, provides similar guidelines upon the terms 'research' and 'development' through the definition of intangible asset impacts at Section 18 and through the broad glossary of terms at Appendix 1:

'[R]esearch: Original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding.'

'[D]evelopment: The application of research findings or other knowledge to a plan or design for the production of new or substantially

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improved materials, devices, products, processes, systems or services before the start of commercial production or use.’

(FRS 102, FRC, September 2015)

What qualifies as R&D activity?

2.9 *SSAP 13* lists the following activities as normally being included as R&D:

- experimental, theoretical or other work aimed at the advancement or discovery of new knowledge;
- searching for applications of that knowledge;
- formulation and design of possible applications for such work (product development);
- testing or evaluation of alternatives to products, processes and similar;
- design, construction and testing of pre-production prototypes;
- design of products, processes etc involving new or substantially improved technology.

Similarly, the following activities are usually excluded from R&D:

- testing analysis for the purposes of quality control;
- periodic or minor alterations with marginal improvements;
- operational research not linked to specific R&D activity;
- correcting mechanical breakdowns no matter how complex;
- legal, administrative work regarding patents;
- market research.

(*SSAP 13*, para 6)

Practical point 2.1

The inadequacy of relying upon the GAAP standard as a reliable definition for tax purposes is shown in a number of key aspects, including:

Innovation – appreciable improvement

Whilst para 6 of the BIS Guidelines requires the presence of innovation in development-based work to meet the *SSAP 13* definition of R&D work, the standard falls short of the BIS Guidelines test which requires innovation is also represented by an ‘appreciable improvement’.

System uncertainty

The cost of system failure in commercial production is not recognised as R&D within the SSAP activity list. Yet this type of failure is very common in the R&D environment. Experience shows that R&D activity, aimed at attaining system certainty will run alongside failure in the commercial production process or development of new systems or devices.

SSAP 13 – Helpful features

2.10 *SSAP 13* begins a useful review of technical uncertainties within a project. This appraisal is good groundwork for considering the tax definition of R&D and, in particular, the presence of ‘technical uncertainty’ within the project, as required by the BIS Guidelines, paras 13–14.

The concept of scientific and technological uncertainty is extended significantly by the BIS Guidelines definitions. The documentation of uncertainty is the foundation of the R&D relief framework. For the purposes of the accounting standard, however, it does no more than provide an overview as to the relevance of technical uncertainty and the organisation of a valid project.

SSAP 13 is also useful because the important concepts of ‘subcontracted R&D activity’ and ‘production work’ are considered. These terms, which are so significant within the tax definition, have their first airing in the *SSAP 13* standard. For example, should a long-term contract have significantly enough subcontracting benefits, this must be disclosed as ‘contract works in progress’ (*SSAP 13*, para 17).

SSAP 13 – Cost recognition

2.11 Where R&D expenditure on pure and applied research can be regarded as part of the continuing trading activities, the standard requires costs should be written off as they are incurred.

This contrasts to development based R&D. The development of new products is distinguishable from pure and applied research. It is normally undertaken with a reasonable expectation of specific commercial success and of future benefits arising from the work, either from increased revenue and related profits or from reduced costs. It is permitted, but not obligatory, to defer development expenditure if certain criteria are met, for example, the existence of a clearly defined project with identifiable expenditure.

Deferred revenue expenditure is unlikely to attract relief until released to profit and loss account and aligned to the profits earned by the company in the year. This presents the possibility of ‘futuristic’ R&D claims based upon historic cost accounting.

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Other accounting issues

R&D tax relief for intangible assets: CTA 2009, s 1308 (FA 2004, s 53)

2.12 Accounting for intangible asset expenditure can compromise R&D tax relief. This was eased slightly when *FA 2004* introduced a special adjustment in the company's tax computation for 'capitalised' expenditure otherwise ineligible for RDTR. 'Section 53 adjustments' can be applied to capitalised R&D expenditure for accounting periods beginning on or after 1 January 2005 in very specific circumstances.

The move in the EU towards IAS and, in particular, the use of IAS 38, had presented issues for R&D companies required to recognise certain types of intangible asset expenditure as 'capitalised' expenditure in pursuance of that or other accounting principles. The ability to make an adjustment prevented any disparity between non-EU and EU R&D companies, adopting IAS for the first time.

But the adjustment only applies where a company had simply complied with accounting principles in determining the 'value of' an intangible asset (*SI 2004/3268; FA 2004, s 53(1)*). A common misconception is that if a company has capitalised R&D expenditure, tax relief is still available, but the wording of the legislation does not support this.

The *s 53* provision was rewritten into *CTA 2009, s 1308* in 2012. No relief is possible for amortisation or for deductions made in a previous accounting period (*s 1308(5), (6)*). For tax purposes an 'intangible asset' is defined as including, but not being restricted to 'any intellectual property' (*s 1308(7)*).

Practical point 2.2

Companies often take the principle of *CTA 2009, s 1308 (FA 2004, s 53)* to mean that any expenditure capitalised in the balance sheet is potentially eligible for RDTR.

This is not correct, as *s 1308* only permits RDTR where the expenditure is brought into account in determining the value of an intangible asset (*s 1308(4)*).

Whilst the definition of an intangible asset for accounting purposes is extremely broad, no other type of capital expenditure is recognised for the purposes of the relief until aligned to the profits earned in the period of claim.

The above practical point is best illustrated by an example:

Example 2.1 – Deferred Expenditure Co (DEC)

DEC paid for various project costs in 2012. DEC's accountant regarded these as deferred expenditure assets in the company's balance sheet and capitalised £1 million accordingly.

Analysis

RDTR arises where revenue costs relate to the profits earned in the year. *CTA 2009, s 1308(4)* relaxes this rule but only where expenditure is brought into account for determining the value of an intangible asset.

There is no indication that the expense relates to intangible asset expenditure. Once DEC releases the expenditure to the profit and loss account it can correctly claim RDTR. No claim is feasible for 2012.

REVENUE V CAPITAL EXPENDITURE

Condition 2: Eligible R&D costs – capital or revenue

2.13 R&D tax relief schemes reward only revenue expenditure, which is allowable as a deduction in the company's profit and loss account for the period of claim (*CTA 2009, ss 53, 1044(5), 1063(4), 1068(4) and 1074(7)*).

But the accounting treatment of expenditure by a company is not necessarily conclusive. For example, the recognition of an asset on the balance sheet or the write-off of expenditure immediately to the profit and loss account may simply represent the rules of a particular accounting standard. This is not indicative of whether the expenditure is revenue or capital for tax purposes.

The characteristics of capital expenditure have frequently come before the courts. Helpful case law such as *Odeon Associated Theatres Ltd v Jones* (1972) 48 TC 257 and *Conn v Robins Bros* (1968) 43 TC 266 point to the 'progressive' interpretation of what is revenue as distinct from capital expenditure. In the ever-changing R&D environment, it sometimes seems remarkable that an 'enduring benefit' can ever really be perceived from innovation.

However, the argument is still a valid one for HMRC, and care is required, particularly with initial work upon software systems which have been set up for the very first time. In general, HMRC will regard an 'enduring benefit' as one which lasts beyond two years without major overhaul. It is also not unusual for a 20% cost to balance sheet ratio to be considered as an appropriate indicator of capital expenditure.

Advisers often mistake pioneering systems work as eligible R&D activity, emphasising that the more bespoke, one-off and unique the outcome is, the

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more relief it is likely to attract. This can overlook the capital characteristics of a project, which may require further consideration before relief can be claimed. This point is best discussed by way of an example.

Example 2.2 – Company setting up initial systems – capital v revenue R&D projects

Pay Co (PC) is establishing a pay day loan business and invests considerable sums in the development of its systems for credit referencing and encrypted client portals. Whilst a great deal of this work is routine, there has been distinguished R&D activity in the encryption work as a unique portal accessible only to secondary lenders is embedded within the applicant's data.

PC has spent around £1.2 million to date on its project work, it does not expect to revisit the system architecture until around 2016 but it sees the encryption work as a recurrent spend as there are constant malware threats to the integrity of the data. It wishes to claim relief upon the £1.2 million spent to date and a further claim of £2 million over the next three years.

Analysis

PC has some valid project activity, leaving the routine activity to one side. However, the initial spend upon the system has produced an 'enduring benefit' for the company. In the software field, a benchmark of two years is generally acceptable. As the company is not likely to revisit the platform until 2016, it has capitalised the cost and no further relief is due.

The work upon the encryption aspect of the system is 'revenue' in nature. There is a short shelf life for the expenditure and it needs constant evaluation and development. The extent of R&D relief will be determined by the advances and uncertainty inherent within that work. Assuming this is established, the recurrent R&D spend qualifies for relief.

Practical point 2.3

In looking for capital/revenue characteristics within a project, it is sometimes useful to look at the hire of project staff in further detail. Where personnel are hired for a short period to work upon singular elements of a project, it may be that this is an indication of capital expenditure. This would contrast with hire on a regular basis for ongoing development work upon a system.

In practice, most projects will contain a split of both revenue and capital expenditure. Experience shows that the apportionment of costs is much easier towards the final stages of the project work. Interestingly, experience has shown that HMRC are not inclined to deny relief for capital aspects of failed R&D work, regarding the whole of such expenditure as being eligible. This reflects

the obvious fact that any perceived enduring benefit could not materialise; there is no ‘motive’ test within the R&D relief framework.

Capital allowances

2.14 A scheme of capital allowances, ‘Research development allowances’ (RDAs), is available for project equipment and fixed assets, excluding land. The allowance replaced the scientific research allowance.

Two particular areas of caution are required. The allowance does not cover the deployment of equipment into ordinary commercial use. At this point, an adjustment may be required to apportion the R&D/non-R&D activity.

Secondly, the allowance specifically excludes land costs from the relief.

The usefulness of the allowance has relaxed a little for SME companies, as the annual investment allowance (AIA) increased from April 2013 to £250,000. However, recent changes to AIA limits may refocus the allowance.

The practical use of RDAs is underclaimed in SME R&D claims. This is discussed further at **Chapter 8** below.

Practical point 2.4

Capital expenditure upon equipment used directly in the project activity can qualify for 100% RDAs.

This is discussed further at **Chapter 8**.

THE DEFINITION OF R&D FOR TAX PURPOSES: THE BIS GUIDELINES

Condition 3: The definition of R&D for tax purposes – BIS Guidelines 2010

2.15 The BIS Guidelines list two key ‘Gateway’ tests which must feature in the company’s R&D activity. The tests apply universally to all types of R&D work irrespective of the company’s size, stating:

That R&D takes place for tax purposes when a project seeks to achieve an **advance** in science, or technology. para 3

Also:

The activities directly contributing towards achieving the advance through the resolution of **scientific or technological uncertainty** are R&D. para 4

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The BIS Guidelines have applied this generic definition of when R&D takes place for tax purposes since the relief was introduced in 2000. This Guidance does not define what R&D activity actually 'is', or 'is not', but rather, 'when' it occurs.

Although this analysis appears opaque at first reading, the concept of activity and its linked project costs running in tandem to each other is extremely relevant in calculating the relief due. This is drawn out by paras 4 and 6 of the Guidelines and throughout the legislation at *CTA 2009, Pt 13*, which highlights that the relief is triggered only by 'directly contributing' project activity. It is then that cost collection may begin.

The claimant must provide strong evidence of the technical advances sought from project work and be able to identify the uncertainties involved. Key to an understanding of this will be the strategies formed by the company's 'competent professionals' within the project team. The baseline knowledge against which the advances were identified will also be a key consideration. For example, development-based R&D work upon product improvements will only be R&D for tax purposes where knowledge or capability is extended. Where a product, process or system is improved, the R&D project must demonstrate an 'appreciable improvement' was sought. This is taken to mean that the scientific or technological characteristics of the product, process or system concerned must be fundamentally altered.

The BIS definition of R&D then goes on to provide a number of R&D scenarios and benchmarks. These are summarised usefully at para 9. This and subsequent paragraphs then detail a number of practical examples of R&D and develop the relevance of terms with special meaning for the purposes of the relief.

Finally, there are a number of activities generally accepted by the BIS Guidance to be R&D, including:

- The design, construction and testing of prototypes and pilot plants para 39
- The achievement of design objectives through the resolution of technical uncertainty para 41
- The design of cosmetic or aesthetic improvements to processes and products where the cosmetic effect is achieved through the application of science or technological advance para 42
- Improvements in the scientific or technological means to create, manipulate and transfer information or content para 43

Although it may appear anomalous that innovative companies are required to use a definition of innovation which is some 14 years old, the Guidelines have stood the test of time and are generic enough to embrace any type of technical activity undertaken by any company type or size.

Experience shows that HMRC have added their own enhancements to many of the defined BIS terms and, where terms have no legislative special meaning, added additional special meaning and interpretation.

THE R&D BOUNDARIES – DIRECTLY CONTRIBUTING ACTIVITY

Condition 4: Directly contributing project activity, the R&D boundary

2.16 When a company works upon an innovative project, it will often view the whole of the project work as eligible. This is not correct, and in the case of product development-based R&D, can grossly distort the size of the apparent claim. Legislation restricts relief purely to ‘directly contributing activity’ which will take place during the ‘start and end’ of the project, ie within the R&D boundary.

‘The activities which directly contribute to achieving the advance in science or technology through the resolution of scientific or technological uncertainty will be R&D.’

(BIS Guidelines, para 4)

‘To directly contribute to achieving an advance in science or technology, an activity ... must attempt to resolve an element of the scientific or technical uncertainty associated with achieving the advance.’

(BIS Guidelines, para 26)

To identify the boundary between R&D and non-R&D work, it is useful to discuss the company’s project work with the company directors and technical staff as well as competent professionals within the industry. The SSAP definition is useful, if inadequate here.

This shows us that an activity is R&D if it is carried on in a technical field with a view to the ‘extension of knowledge’. Whilst the BIS definitions extend the R&D scenarios to include product development and a range of other activities, the boundary common to each is that the company is yet to reach ordinary production capacity and routine productive work. This blockage arises because of scientific or technological uncertainty.

Example 2.3 – R&D boundaries, directly contributing activity

Engineering Co (E Co) has formulated a special design for new concrete structures suitable for motorway use as crash barriers. It has patented the

2.16 *The research and development tax relief framework*

technology reflecting substantial R&D upon impact dynamics, alternative materials and finishing processes.

The directors confirm the project has been ongoing for the last four years and as the company is beginning to look at new uses for the product, it may last a further two or three years. It believes it has around seven years of RDTR, which may impact significantly upon its requirement to pay quarterly instalments of corporation tax.

Analysis

An R&D project is defined by the BIS Guidelines as beginning when work to resolve scientific or technological uncertainty starts. The project work will end when that uncertainty is resolved or work upon it ceases (paras 33 and 34).

E Co seems to have been carrying on valid R&D work at some point over the last four years, and it is possible that this will continue over the years to come. It is likely that pre-project work is included in the directors' estimation of R&D activity, including feasibility studies, marketing and financial studies, which are not R&D. Similarly, the alternative use of the product may simply be commercial research at this stage, again not R&D.

At the heart of deciding the R&D boundary for the project(s) is an understanding of what technical uncertainties were formulated and when work towards each took place.

It may be that two separate projects will be visible, depending upon the technical work involved upon the alternative use of the new concrete structures.

It is feasible that project two never gets beyond the commercial evaluation phase and as such is not R&D at all.

For R&D activity to be regarded as making a 'direct contribution' to achieving the advance in science or technology, it must attempt to resolve an element of technical uncertainty which can be linked to the advance sought (para 26). It follows that project costs align themselves to the resolution of that uncertainty, which until it 'exists' cannot begin the collection of project costs. The following examples of direct activity are included in the BIS Guidelines at para 27:

- (a) activities to create or adapt software, materials or equipment needed to resolve the scientific or technological uncertainty, provided that the software, material or equipment is created or adapted solely for use in R&D;
- (b) scientific or technological planning activities; and
- (c) scientific or technological design, testing and analysis undertaken to resolve the scientific or technological uncertainty.'

The direct contribution requirement is repeated in the CTA legislation. For example, *CTA 2009, s 1124* which states that for staffing costs to be considered eligible for relief, directors or employees must be 'actively engaged' in relevant research and development activity.

*Establishing directly contributing activity – the R&D processes/
lifecycle*

2.17 In practice, directly contributing activity breaks down into four core phases:

- A Pre-project work;
- B Core project work;
- C Establishing the technology;
- D Entering commercial production.

A Pre-project work

This includes the following activities:

- Technical feasibility studies;
- Proof of concept;
- Commercial costing considerations, marketing and legal preliminaries.

The first two pre-project phases will be eligible for consideration as R&D. Commercially driven work will not. Work that falls between the two extremes, such as the hire of the project team may be eligible as indirectly contributing activity.

B Core project work

Core project work will be aimed at resolving the technical uncertainty and will usually begin after a substantial research phase. This phase will be the company's core project work including developing prototypes or pilot plants in an attempt to confirm the project results are technically competent.

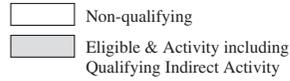
C Establishing the technology

This vital phase of R & D is often overlooked when a viable technology is attained on paper. This part of the project work will include activity aimed at integrating the technology into its technical setting and attaining system certainty.

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D *Attaining commercial production*

The final project stages are usually non-qualifying activity as technical certainty will have been attained at C (above). However this is not always the case, for example, technological certainty may fail at a certain level of production and fresh technical uncertainty can arise.



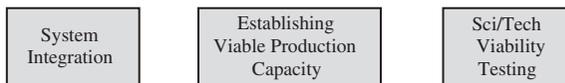
(A) Pre-Project Work



(B) Core Project Work



(C) Establishing the Technology



(D) Entering Commercial Production



*Producing modifications or cosmetic effects

* may involve R&D if technical uncertainty

Once technical uncertainty has been resolved, the collection of project costs usually stops. The core R&D phases will exclude the last two activities and may exclude the third element of testing where no technical uncertainty is evident, although this does not prevent the beginning of new projects in fresh areas of technical uncertainty.

Practical point 2.5

The core areas of technical uncertainty are usually identified by an involved discussion with the company's project team leader. The company's 'competent professional' will know the R&D process that has taken place, and the steps that lead to the formulation of technical uncertainty and the boundaries involved.

The competent professional will also know the activities directly related to the advance, having arranged the project work to target and resolve these. Similarly, the competent professional will know when these uncertainties had reached a conclusion.

Once the uncertainties are formulated, project activity from that date can be targeted at 'directly contributing' to the advance sought, until they are resolved or abandoned.

This matrix will set the R&D project boundary and the timeline for the collection of project costs.

Activities that do not directly contribute to the resolution of technical uncertainty

2.18 Paragraph 28 provides a defined list of activity precluded from being R&D. These show obvious non-scientific objectives, but a second category of 'qualifying indirect activity' requires careful review.

Non-technical activity includes the following:

- commercial and financial activity connected to the innovation, such as marketing, or finance arrangement;
- work upon non-scientific aspects of the innovation such as simple graphic design, work satisfying industry standards of safety beyond technical uncertainty;
- production and distribution of the innovative product;
- administration and support costs, including maintenance and security, transportation and repairs.

Practical point 2.6

It is often useful to review project staff's timesheets to gauge the extent of ineligible activity. This will vary according to the experience and qualifications of the team members. Performance pay and bonuses may also provide pointers towards R&D activity.

2.19 *The research and development tax relief framework*

Qualifying indirect activity (QIA)

2.19 Not all project activity undertaken by project staff will be directly linked to technical work and a ‘halfway house’ allows some relief for these costs. QIA can be regarded as R&D where there is a close link to the project’s technical activity. This type of work supports the R&D project work, but in itself will not be R&D.

Paragraph 31 of the Guidelines explains that activity forming part of the project either in a ‘support’ role or directed at ancillary research, feasibility studies or training for the R&D project team is QIA.

This is best shown by an example.

Example 2.4 – Day-to-day administrative work – ineligible activity

Telecom Co is in the midst of a project aimed at a multilingual ‘speaking’ yellow pages service. There is a dedicated scanning department working within Telecom Co. One of its key functions is to populate the database for the R&D project; the costs are around £100,000 out of a £500,000 department budget.

Analysis

R&D relief will be feasible for the staff costs of £100,000, the remaining £400,000 is not supporting the R&D project activity, but is relevant to the company’s day-to-day administrative work.

Example 2.5 – Commercial or legal work – ineligible activity

Telecom Co requires further qualified personnel to work on the next phase of the project. The team leader spends time upon drafting job specifications and interviewing. He is supported by the company’s administrative team and the HR department.

Analysis

The team leader’s time spent upon the recruitment is QIA (BIS Guidelines, para 31(b)) and indirectly linked to the project tasks. The work of the administrative team is not ‘directly’ supporting the project work. Together with the HR department’s work, its key objective is a commercial or legal one to help the smooth running of the recruitment process.

System uncertainty

2.20 R&D activities will normally require some sort of testing to prove technical competence. This takes many forms. For example, beta testing,

prototyping or dry runs are common in manufacturing-linked project work. Usually this type of work often cannot achieve technical functionality in isolation as there will also be unknowns about how the results of the project integrate into existing systems, technologies or production methods.

Bringing a particular project to an end may begin a new R&D process of ‘system uncertainty’, where a new system is added into the existing architecture and the performance as a whole may be scientifically or technologically uncertain.

Work directed at resolving system uncertainty is usually R&D. But in some industries, especially those with significant safety regulations, a great deal of ‘safe’ further testing is required to attain certification. This will not necessarily be R&D if no technical uncertainties are involved, and the point is an enthusiastic one for HMRC.

By way of an example, many cosmetic and pharmaceutical companies will be required to load tests upon representative samples of end users irrespective of attaining a ‘safe’ product. This type of activity will not be R&D but the satisfaction of a commercial agreement or industry safety standard.

Practical point 2.7

Subprojects are a common hallmark of R&D project work. There is no specific guidance upon this area, and each project activity must simply be evaluated as such in its own right.

Should new advances and uncertainties become apparent during the course of the project, the legislation is not taken to mean these should be excluded, as only the primary project can be capable of relief. Separate projects or subprojects must be reviewed on their own merits as potential new projects if the presence of an advance and uncertainty seems possible.

Similarly, if a subproject/‘shadow project’ begins, it carries no ‘automatic’ assumption of eligibility to relief simply because the main project is eligible.

Example 2.6 – Parallel project

Hot Air Co (HAC) began a project to develop a hand drier for use in schools. Two important features needed to be present in the appliance: (1) a temperature control mechanism so the temperature outflow never exceeded 35 degrees; and (2) a cut-out mechanism should small fingers be poked into it. HAC knew that the existing products on the market had neither feature, and this involved sufficient technological uncertainty in the advances sought.

HAC carried out a successful project and then considered the use of the drier in high usage outlets such as restaurants and airports. HAC carried out a parallel

2.20 *The research and development tax relief framework*

project but needed to resolve fresh areas of uncertainty arising from the effect of the high demand, and 24/7 environment. Parallel Project 2 needed to design more robust safety features with enhanced capability and heat detection. It wants to claim R&D relief for both projects.

Analysis

HAC has identified technical uncertainty in its first project and has begun a parallel project after promising reviews of alternative, more intensive uses for the Project 1 design. The point at which this is begun is an important one. There are two scenarios. If Project 2 has commenced when the knowledge from Project 1 was not available or apparent, it is likely to qualify as part of the scope of Project 1. The activity will be R&D.

If Project 2 simply exploits the knowledge obtained from Project 1 in a new way with some added safety features, this will not be R&D. Part of project 2 may qualify if the new features represent a technological advance and uncertainty which can be documented. If these features involve no more than copycat technology from existing hand driers, then that part of the activity will not be regarded as part of the R&D project work (no uncertainty, new knowledge or new capability) and will not be R&D.

Summary

When does R&D begin and end?

2.21 The above shows that for tax relief purposes, R&D will begin when the scientific or technological uncertainties relevant to the technical activity can be formulated. This is distinct from the ordinary commercial and legal steps that will precede R&D project work. However, in practice, technical uncertainty can meander and costs may still be eligible under a wide variety of circumstances. Paragraphs 33 and 34 of the BIS Guidelines confirm that the cost collection will 'end' when knowledge or capability is available in a form usable by competent professionals, or when a viable prototype or similar is produced and no uncertainty remains.

Practical point 2.8

Creating a concept for a new product or system and carrying out the relevant marketing and financial studies is commonly regarded as the beginning of valid R&D activity. Companies will believe that substantial amounts of the director's time at this stage will qualify for RDTR. Legislation tells us that neither activity is regarded as R&D.

Similarly, at the end of a project, product testing in compliance with industry safety standards or regulatory practice will often be regarded as an extension of the R&D work. Paragraphs 33 and 34 tell us otherwise. R&D

ends once a viable technology is formulated, irrespective of extraneous safety standards or non-technological issues with the new product.

In the automotive industry, there are very high safety standards for new technology. Testing will go far beyond the benchmark for viable production in new products and batches of thousand product runs will be required to attain the necessary safety standard. This marginal activity is unlikely to be R&D, satisfying commercial or safety standards, as distinct from resolving technological uncertainty.

ELIGIBLE R&D COSTS – CTA 2009, PT 13

Condition 5: Scheme rules, Ch 13 – Categories of qualifying expenditure

2.22 Once R&D activity encompasses points 1 to 4 of the framework, the provisions of Pt 13 must be applied to the project costs by reference to the company's accounting period.

Although the details of each individual scheme differ, there are a number of common points which are summarised below. The detailed rules of each individual scheme are discussed at **Chapters 4** and **5** below.

A number of caveats apply to the choice of scheme for relief. The commercial context in which R&D activities are undertaken is often a decisive factor. For example, where the SME does not meet its R&D costs independently, it must claim under the *Ch 3* scheme of relief at the reduced 'large company' rate, or the new *Ch 6A* RDEC scheme.

An overview of the most common R&D costs follows.

Categories of qualifying expenditure

Staffing costs

2.23 Personnel costs make up the bulk of R&D claims within the SME schemes. Not all staff are regarded by the legislation as eligible for relief. Separate cost categories apply to employees, subcontractors and 'externally provided workers' (EPWs) supplied through third parties or agencies. Large scheme reliefs do not permit subcontracting costs as an eligible category of expenditure.

Currently, three types of relief are possible for 'people costs' ie:

- costs relating to salaries and emoluments paid to directors or employees of the claimant company (*CTA 2009, ss 1123–1124*);

2.23 *The research and development tax relief framework*

- costs relating to personnel engaged by the company as subcontractors within the project (*CTA 2009, s 1133–1136*);
- costs relating to personnel supplied to the claimant through third parties. This relief is known as expenditure upon ‘externally provided workers’.

The term ‘subcontractor’ is given its ordinary meaning. HMRC expect a subcontractor to have responsibility for a project ‘deliverable’ and bear the risk and costs associated to this, as distinct from a ‘freelance consultant’.

An EPW is one supplied through a third party and engaged in research or development activity which is relevant to and under the supervision of the claimant. A ‘tripartite’ arrangement needed to be demonstrable for expenditure incurred before 1 April 2012. After that date, the requirement is not as prescriptive, but there must still be at least three parties involved in the engagement.

Practical point 2.9

A common misconception is that all staff costs for personnel working upon a project will qualify for relief. The scheme rules prescribe only three types of ‘people’ cost which can be considered for relief:

- emoluments and similar paid to employees and directors of the claimant company;
- the cost of EPWs which is met by the company;
- the cost of subcontractors tasked with meeting the responsibility of supplying specific project deliverables. This cost is available only within the SME scheme.

This leaves a number of bona fide project personnel costs without relief. Common examples are:

- group employees seconded on to the claimant’s project work;
- employees and directors who are not ‘paid’ but costed through an intercompany account (*Gripple Ltd v HMRC* [2010] EWHC 1609 (Ch));
- freelance consultants, who may, in fact, be either subcontractors or externally provided workers;
- fees etc invoiced by directors who supply their services to the claimant company through an umbrella company or other entity;
- secondees from other companies within the group, for whom costs are not directly met by the claimant company;
- employees with dual contract arrangements;
- employees for whom government funding has been provided;
- subcontracting costs incurred by large companies.

The legislation upon staffing costs has changed only very slightly since 2000. In 2004, the 80/20 rule was removed. But it took until April 2012 for the strict tripartite rules of the externally provided workers regulations to be relaxed. It is generally felt these did not go far enough to remove the disparity of some project workers qualifying for relief and others being ineligible purely because of the contractual engagement used.

In practice, HMRC take the case of *Nichols v Gibson* (1996) 68 TC 611 to mean that R&D relief cannot be applied to redundancy payments, and presumably golden handshakes and ex gratia payments which are motivated by commercial or legal considerations.

Practical point 2.10

Freelance consultants are very common in a number of 'high-tech' industries. This reflects both the scarcity of very skilled personnel in the UK and the fact that hirers are working in an uncertain, highly innovative space.

Freelance consultants do not qualify for any type of R&D relief under either the SME or large schemes. Where a third party is engaged by reference to weekly/hourly pay, it is unlikely that the engagement will represent a 'subcontracting' relationship.

Where a third party is engaged through their own company, or other third party, as an EPW, care was required prior to April 2012 that a 'tripartite' arrangement was demonstrable.

These points are developed further at **Chapter 4** below. In practice, a review of both the invoices and contracts for non-employee project personnel should identify the substance of the relationship.

Employees and directors – CTA 2009, s 1123–1124

2.24 For R&D tax relief purposes, the legislation states that a company's direct staffing costs are those paid to employees and directors employed by the claimant company. Only those costs reflected, and paid, in the profit and loss account for the year of claim from the list below attract relief (*CTA 2009, s 1123–1124*).

- emoluments of employees or directors of the company. This includes salaries, wages, bonuses and any type of cash payment;
- expenses incurred directly by employees or directors and reimbursed as money;
- Class 1 secondary National Insurance contributions paid by the employer;

2.24 The research and development tax relief framework

- compulsory EEA 'National Insurance' contributions for internationally mobile employees (*Council Regulation 883/2004/EEC* ([2004] OJ L166/1), Article 3);
- pension contributions paid into a qualifying pension scheme.

Practical point 2.9 illustrates that a number of scenarios in which project staff are engaged will preclude tax relief. Case law and statute have also shown us that the definition of staffing costs cannot include the following types of staff 'payment' or award:

- dividend payments or waivers;
- benefits in kind – a loophole existed briefly in 2004 permitting relief on all benefits made available to employees;
- redundancy payments – HMRC cite the case of *Nichols v Gibson* (1996) 68 TC 611;
- commissions paid to recruitment agencies for the hire of project personnel;
- wages and salaries etc paid to employees of other companies within a group unless the payroll is run by that company purely out of administrative convenience. Whether an arrangement like this could be regarded as the provision of externally provided workers will depend upon the individual circumstances;
- reimbursed credit card expenses of employees or directors;
- share awards or the award of share options;
- opportunity costs or notional salaries.

Practical point 2.11

Some high-tech companies 'pay' staff by means of dividends, share options or deferred equity rights. In the case of *PA Holdings Ltd* [2011] EWCA Civ 1414, the company directors agreed that dividends upon preference shares would be awarded to them in lieu of cash bonuses.

This arrangement gave the company valuable cash flow savings, and gave the directors clear performance incentives. HMRC argued an income and National Insurance charge was exigible. Although a partial victory by the company followed, in an R&D situation, no relief would be feasible upon a 'deemed' payment within the scope of what is now the avoidance provisions of the *Income Tax (Earnings and Pensions) Act 2003* (ITEPA 2003), ss 413B–425.

Analysis

Staffing costs are only eligible where paid as cash to employees or directors of the claimant company. This precludes RDTR from being available for most incentive 'payments' not paid as cash.

Externally provided workers (CTA 2009, s 1127–1134)

2.25 Frequently R&D activities will be undertaken by non-employees of the company. The cost of using individuals engaged by the company through a third party is expenditure on an EPW. This is not expenditure upon ‘staffing costs’, or ‘subcontractors’, but a separately identifiable head of expenditure.

The definition of an EPW is based upon the income tax rules for agency workers (*ITEPA 2003, s 44*). The EPW rules also apply where the worker is an employee of the staff provider.

Prior to 1 April 2013, the regulations on EPWs required the R&D company to have in place a tripartite arrangement for the engagement. The following conditions needed to be met:

- The worker must be an individual rather than a company.
- The worker must not be a director or employee of the company or companies within the trading group of the R&D claimant.
- The worker must personally provide, or be obliged to personally provide the services concerned.
- The worker is subject to supervision and control by the R&D company in respect of how the services are performed.
- The worker must provide his services through or by the staff provider, whether or not he is a director or employee of the providing company.
- The provision of the services did not constitute the carrying on of activity contracted out by the company.

These rules were modified very slightly for expenditure on EPWs incurred on or after 1 April 2013. The rules now admit expenditure for additional parties involved in supplying the worker. Staff may now be provided indirectly through more than one party.

Subcontractor payments

2.26 The question of what a ‘subcontractor’ is follows the ordinary meaning of the word. The HMRC approach is summarised in CIR84250, which states:

‘Where there is a contract between persons for R&D activities to be carried out by one for the other, then the R&D activities have been subcontracted. A contract to provide services rather than to undertake a specific part of the activities is not subcontracted R&D. Nor is a contract of personal employment.’

Relief for subcontracting costs is provided by *CTA 2009, ss 1133–1136* for the purposes of calculating expenditure upon contracted out R&D activity (*ss 1053(1), 1072 and 1102(2)*).

2.26 *The research and development tax relief framework*

The amount of relief depends upon whether or not the parties are ‘connected or unconnected’, or elect to be so. For most R&D claimants, the unconnected treatment relieves a maximum of 65% of the subcontractor’s costs paid by the claimant in the relevant accounting period.

Where a payment is to a connected party, the costs to be included are the lower of:

- 65% of the actual payment to the subcontractor; and
- the relevant expenditure of the subcontractor upon the project’s R&D deliverable.

Personnel costs: connected persons

2.27 The amount of relief claimable is dependent upon whether or not the claimant is ‘connected to the personnel involved’. The identification of ‘connected persons’ is relevant to the following categories of expenditure:

- externally provided workers;
- subcontracted R&D activities;
- contributions to independent research (large schemes only).

‘Connection’ follows the definition of *ICTA 1988, s 839*. Various elections are feasible for unconnected parties to be regarded as ‘connected’, which are considered in more detail at **Chapter 4** below.

Software and consumable items (ss 1125, 1126)

2.28 Relief is available for both large and SME companies incurring revenue upon ‘computer software or consumable items’. The project costs must reflect software or consumable items employed directly in R&D activity. The definition specifically includes water, fuel and power (*CTA 2009, s 1125*).

Relief is limited to costs attributable to ‘direct involvement’ with the project activity. The example given by HMRC states that power used in a training facility would be included to the extent that the facility was providing training to directly support an R&D project’ (BIS Guidelines, para 31(d)) but not for training that was required for more general purposes.

Materials which are ‘transformed’ are equally eligible for relief. In practice, HMRC are not progressive in regarding anything other than physical, traditional materials as being capable of being ‘transformed’. Experience shows that this viewpoint excludes the consumption or transformation of digital imagery or electronic information from one state to another changed state. This is disappointing as there is no simple definition of ‘consumed or transformed’. CIRDS2400 states that a key aspect is that materials or consumables are ‘no longer so useable in their original form’.

FA 2015 restricted the costs of consumable items eligible for RDTR where the company sells the outcome of its development work as part of its trade. The provision updates guidance around the definition of ‘consumables’ to exclude circumstances where:

‘The R&D activity results in goods or services sold in the course of the business – the cost of items reflected in those goods or services will not attract tax credits.’

Qualifying expenditure is therefore limited to consumables that are wholly absorbed in the R&D activity prior to commercial production.

Software

2.29 Software is not a consumable item, as it is not consumed or transformed. The definition also usually excludes hardware purchased for the project. This can lead to a conflict where software or hardware is commissioned as part of the company’s beta testing or prototype work. Here specific relief is permitted under para 41 of the BIS Guidelines. For the purposes of *s 1125* relief, it is useful to look only at analytical work for which specific software was licensed or used.

Care is also required to apportion software R&D costs once production commences or system certainty is attained and the R&D project is at an end.

Example 2.7 – Software costs – non R&D use

Fast PC Co (FPC) purchased a number of software licences for use in its ongoing R&D project. One of the licences expires in five years; the other three licences are renewed annually. FPC anticipates its project will end in 2014. Having now reached its final stages, it has spent around £80,000 per annum on its software licences from 2012.

Analysis

FPC has shown the expenditure in its accounts, and the licences are used in the project work.

Relief is due as the expenditure meets the *s 1125* requirements. The costs must be apportioned to exclude ordinary commercial use of the software once the R&D project stops. The cost of the five-year licence will not attract relief in its entirety.

Use other than directly in R&D

2.30 Only activity by employees and directors upon work directly contributing to the resolution of technical uncertainty can be claimed. This

2.30 *The research and development tax relief framework*

is developed further below. The ‘direct contribution’ can include qualifying indirect activity, such as feasibility studies, personnel and administrative functions performed by project staff during the course of reaching the projects’ objectives.

Practical point 2.12 – Staffing costs – large schemes and SME scheme

Staffing costs are defined by HMRC Guidance as being relevant to personnel directly employed by the claimant. Grouped companies frequently have R&D performers in the UK and it is important that employment contracts are aligned to the claimant.

There is an exception to this where, purely for administrative convenience, one company runs the group payroll or the payroll for two or more members of the group.

To develop this point further, the case of *Gripple Ltd v HMRC* [2010] EWHC 1609 (Ch) shows us that ‘paying’ staffing costs through an intercompany account entry will not qualify for relief.

Eligible costs summary – SME scheme

2.31 The following costs are eligible for relief under the SME scheme:

- staffing costs for payments to directors and employees;
- expenditure upon EPWs;
- payments to subcontractors whether connected or unconnected;
- costs of computer software and materials;
- capital equipment used in the project which is eligible for RDA (**Chapter 7**).

Eligible costs summary – large company schemes

2.32 The following costs are eligible for relief under *CTA 2009, Ch 5, s 1077*:

- staffing costs for payments to directors and employees;
- expenditure upon EPWs;
- costs of computer software and materials;
- relevant payments for clinical trials;
- costs of contributions towards independent research activities;
- capital equipment used in the project which is eligible for RDA (**Chapter 8**).

GRANTS AND SUBSIDIES

Subsidised expenditure – SME scheme only

2.33 Grants and subsidies can impact upon the amount of R&D tax relief due. This impact is by reference to the project as a whole rather than the accounting period of claim. The impact arises because SME R&D tax relief is a ‘notifiable State Aid’.

R&D tax relief is not available at the higher SME rate where project expenditure is subsidised. As an alternative, the SME may claim that part of the subsidised costs under one of the large schemes.

There are a number of ways in which expenditure might be regarded as ‘subsidised’. The most obvious types are where a project has received *any* funding which is a notified State Aid. In that case, no expenditure on the whole of that project can qualify for the R&D tax relief under the SME scheme. This reflects the UK’s participation in the European Community Treaty.

If a grant or subsidy is received by an SME, other than through notified State Aid, the expenditure is ‘partially’ subsidised. This is to the extent that it does not exceed the subsidy. This may result in the expenditure qualifying for R&D tax relief partly under the SME scheme and partly under one of the large company schemes (*CTA 2009, ss 1052(6), 1053(5) and 1138* – SME scheme only). The examples at **Chapter 7** highlight the interaction of grants and subsidies with SME reliefs.

Practical point 2.13 – Stage payment or subsidy?

HMRC frequently extend the definition of ‘subsidies’ to include ‘stage payments’ or ‘up front’ contractual payments where an R&D company has entered into a contract for eventual product development.

The argument then flows that the SME has received a ‘subsidy’ and should be denied R&D SME relief upon eligible project work. It is not unknown where stage payments are made to the SME in conjunction with project development work, for the whole of the project costs to be regarded as subsidised and denied relief.

The drafting of contracts involving production-based R&D activity is crucial to R&D relief, and it is important that stage payments are demonstrable as such.

2.34 *The research and development tax relief framework*

CONTEXT OF THE UK R&D FRAMEWORK – THE FRASCATI MANUAL

2.34 The Frascati Manual is an internationally recognised methodology for collecting and using R&D statistics. It is important because R&D relief is available in other territories measuring R&D in a different way. For example, many of the EU grant schemes adopt this model, providing relief for commercially driven costs as part of the R&D project, in contrast to the UK tax model, which concentrates upon purely ‘technical’ costs. The Frascati model defines research as follows.

Research and experimental development (R&D) comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.

The Frascati term ‘R&D’ covers three activities: basic research, applied research and experimental development.

Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view.

Applied research is also original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.

Experimental development is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed. R&D covers both formal R&D in R&D Units and informal or occasional R&D in other units.

The Frascati Manual lists situations where certain activities are to be excluded from R&D except when carried out solely or primarily for the purposes of an R&D project. These include: routine testing and analysis of materials, components, products, processes etc; feasibility studies; routine software development; general purpose data collection. The later stages of some clinical drug trials may be more akin to routine testing, particularly in cases where the original research has been done by a drug company or other contractor.

Frascati was originally written by and for the experts in OECD member countries who collect and issue national data on R&D. Over the years, it has become the standard of conduct for R&D surveys and data collection not only in the OECD and the European Union, but also in several non-member economies, for example, through the science and technology surveys of the UNESCO Institute for Statistics (UIS).

The Frascati Model plays no direct part in UK R&D tax legislation, but is relevant to UK R&D performers interested in obtaining EEA funding or grants for project activity, or trying to establish international tax comparisons.

JUDICIAL GUIDANCE

2.35 Two contrasting R&D tax cases underline the analytical nature of the tax reliefs. The case of *Gripple Ltd v HMRC* [2010] EWHC 1609 (Ch) shows the ‘micro’ detail with which the claim must be constructed. Complementing this, the case of *BE Studios Ltd v Smith & Williamson Ltd* [2005] EWHC 1506 (Ch) highlights the relevance of documentation evidencing the above R&D framework is critical. That case shows that the wider ‘macro’ high-tech R&D environment in which the company found itself is almost an irrelevance.

Both cases show that the structure of the R&D relief framework forms a ‘meticulously drafted code which must be ‘followed to the letter’. If R&D work is not evidenced as a project following a systematic approach targeting technical uncertainty, no relief is possible.

This became very evident in the High Court during the appeal made by *BE Studios Ltd*. BE Studios Ltd was a software company, which described itself as ‘innovative’ and at the ‘cutting edge’ of computer software development, a leader in its technological environment. It filed a claim for R&D relief upon various computer game projects. In support it described the high-tech nature of its setting and the enhanced functionality resulting from its work. The claim was then rejected by HMRC.

The company pursued its R&D claim to the High Court, where Mr Justice Evans-Lombe confirmed that the company’s approach, in assuming that all of its activities were R&D, and deducting specific disallowable activities such as marketing, and non-technical work, was an ‘entirely inappropriate’ approach to preparing the claim. The provisions of *SSAP 13* and the BIS Guidelines act as ‘gateways’ through which all claims must pass to be allowable.

Mr Justice Evans-Lombe stressed the need to follow the R&D framework. It was crucial to identify the scientific or technological uncertainties in its work and quantify the expenditure on seeking to resolve these. The correct approach to preparing the claim was to read the guidelines and the legislation, to refer to the documentation and to consult with the people undertaking the work.

2.35 *The research and development tax relief framework*

Practical point 2.14 – The R&D claim documentation

Any claim to relief must document, as a minimum, the following criteria:

Accounting requirements

- The expenditure is reflected in the company's profit and loss account or has been used to determine the value of intellectual property.
- The expenditure is recognised as R&D under FRS 102/GAAP, or equivalent standards.

Project requirements

Satisfaction of the 'Definition of R&D for tax purposes' BIS Guidelines 2010 – providing evidence of:

- the field of science or technology and correlating advance(s) sought by the project work;
- the scientific or technological uncertainties present in seeking the advance;
- what the R&D project set out to do and how;
- how the current state of technical knowledge or capability was to be extended;
- why this knowledge or capability was not available or readily deducible by a competent professional working in the field;
- which activities within the project fall within the FRS 102/GAAP definitions and BIS definitions of activity directly contributing to the advances in science or technology which are being sought;
- which of those activities represent 'qualifying indirect activity' by the project personnel;
- the arrangement of the activities as a systematic project;
- the strength of the technical evidence of 'advancement' and 'uncertainty' described by the company's competent professional;
- how ineligible activity was identified and excluded from the claim;
- the relevance of and commercial context for the R&D activity;
- that the rules of the specific scheme have been followed and any commercial circumstances of the company or the project work, have been adequately considered.

Eligible cost requirements

- Only those costs relevant to the R&D work itself are included in the relief.

- The eligible cost headings of staffing costs, subcontractor costs, software and consumables and project equipment are considered in the claim.
- These costs are not subsidised (SME scheme).

CONCLUSION

2.36 R&D tax relief follows a ‘meticulously drafted’ code, made up from piecemeal legislation. The UK framework begins with the presence of FRS 102/GAAP compliant R&D activity within the company’s accounts. The expenditure must then be further evaluated to consider the definition of R&D for tax purposes set out in the BIS Guidelines (2004). Activity that ‘directly contributes’ to areas of technical uncertainty within the advance sought by the project work must be identified. Finally, the expenditure must be both relevant and drawn from the specific heads of costs following the specific SME or large scheme provisions at *Pt 13*.

In summary, the R&D tax relief framework prescribes that a number of complex conditions must be satisfied. Some are particular to the relevant scheme of claim (SME or large schemes), and some are generic to all.

