



The *I. Peter Farrell SpinalCure* Fellowship

Grant Guidelines

Introduction.....	2
Fellowship background – I. Peter Farrell.....	2
Objectives.....	2
Funding and timeframe.....	3
Process.....	3
Candidate selection.....	3
Assessment criteria.....	4
How to apply.....	4
Extensions.....	5
Eligibility.....	5
Host institution eligibility.....	5
Candidate eligibility.....	6
Industry partner eligibility.....	6
Permissible uses of Fellowship funds.....	7
The successful application.....	8
Funding agreement.....	8
Specific research policies and practices.....	9
Responsible and ethical research practices.....	9
Intellectual property.....	9
Publication and dissemination of research outputs and research data.....	9
How the grant is paid.....	9
Review.....	10
Advertising and promotion.....	10
Contact.....	10
Appendix 1 – Guide to applicants.....	11
Part A. Application form.....	11
Part B. Project proposal.....	11
Part C. Career context statement.....	13
Part D. List of top 10 publications.....	13
Part E. Letters of support from referees and industry partners.....	14
Formatting and other submission requirements.....	15

Introduction

These Fellowship grant guidelines (Guidelines) contain information on the *I. Peter Farrell SpinalCure Fellowship*. Candidates must read these Guidelines before applying.

The Guidelines set out:

- Background to the Fellowship
- Objectives of the grant opportunity
- The process for identifying and selecting the successful candidate
- Eligibility criteria
- How the funding may be used
- Obligations following a successful application
- How grants will be monitored and evaluated
- Responsibilities and expectations in relation to the Fellowship
- High level guidance on how to prepare and submit an application (Appendix 1).

Fellowship background – I. Peter Farrell

SpinalCure Australia's exclusive aim is to find a cure for spinal cord injury (SCI) through the promotion and funding of exceptional scientific research. Founded in 1996, SpinalCure is Australia's premier nationally operating not-for-profit organisation committed to making a cure for spinal cord injury not only achievable but also available.

The *I. Peter Farrell SpinalCure Fellowship* (the Fellowship) is named in honour of Peter Farrell. The Fellowship is a key means of helping SpinalCure Australia to work towards its goal of a cure for spinal cord injury.

Peter was a successful computer scientist and led a very active life until a car accident in his 60s rendered him a tetraplegic. Not to be deterred by this turn of events, Peter returned to work and lived life to the full, accommodating his disability. He lived the balance of his life, determined that people such as him should not only derive the maximum quality of life but continue to contribute to society—a worthy goal for all of us.

Objectives

The objectives of the Fellowship are to support *outstanding* early career researchers to:

- undertake innovative research, preferably in the pre-clinical basic science sphere, taking steps towards the goal of finding a *cure* for spinal cord injury
- develop their skills and advance their careers in Australia.

Eligible applications will investigate novel ways to restore and/or protect communication between brain and body after a spinal cord injury, or to enhance our understanding of the spinal cord, thereby advancing the field of cure-related research. **Basic science and pre-clinical projects are particularly encouraged.**

Funding and timeframe

The Fellowship provides up to \$1.5 million (AUD) over five years. Payments will be made to the host institution bi-annually in January and June of each year.

Process

January 2024	SpinalCure promotes and publishes Fellowship guidelines
1 February 2024	Fellowship opportunity opens
31 July 2024	Fellowship opportunity closes
August 2024	Applications are assessed by the Fellowship Advisory Panel
September 2024	Successful candidate is notified
January 2025	Fellowship term commences.

Candidate selection

Applications will be assessed by a Fellowship Advisory Panel (FAP) comprising:

- Three researchers invited by and/or from SpinalCure Australia's Scientific Advisory Panel
- One representative with lived experience of spinal cord injury
- Mrs Caroline Farrell
- International experts in spinal cord injury research, if, in the judgement of FAP members, additional expertise is required.

Members of the FAP will agree on a Chair to manage FAP meetings. All FAP members will refer to the *FAP Review Guidelines* available at <https://www.spinalcure.org.au/the-i-peter-farrell-spinalcure-fellowship/> when assessing applications.

Assessment criteria

Fellowship applicants will be assessed by the FAP against the following Assessment Criteria:

- **Track record and capability (60%)¹**
 - Extent to which the candidate's skills and experience, relative to opportunity, are aligned to the project
 - Research record of the candidate, relative to opportunity, including contribution to the field of spinal cord injury research and indication of impact of published works.
 - Clear evidence of an upward career trajectory
 - Demonstrated ability to lead projects, including managing its resources, personnel, budget and administrative requirements.
 - Potential to become a future research leader with a successful externally funded research program.

- **Project quality and impact (30%)**
 - Scientific merit, innovation, significance and quality of the proposed research
 - Impact of the project, including a clear pathway towards significant research advances that will contribute to a cure for spinal cord injury
 - Feasibility of the research in terms of the project's rationale, supporting evidence, design, participants, requested duration, required resources/facilities, risk management and appropriateness of the budget.
 - Extent to which the project's design, participants and requested budget create confidence in the timely and successful completion of the project.
 - Commitment of possible industry partners to the project, as appropriate, and how they will support its successful delivery.

- **Suitability of the host institution (10%)**
 - Strength of the research environment, including access to expertise, leadership, mentoring and commitment to career development.
 - Provision of access to research equipment, infrastructure and resources, and access to additional personnel necessary to achieve the project's aims

How to apply

Complete applications must be submitted electronically, by emailing all Parts to grants@spinalcure.org.au by **5:00pm on 31st July 2024** (AEST).

A complete application is defined to include each of the following Parts:

- A. Application form that has been filled in to provide all requested information
- B. Project proposal
- C. Career context statement
- D. List of Top 10 publications in the past 10 years
- E. Letters of support from referees and industry partners (where relevant)

¹ The FAP will assess *Track record and capability* with reference to the Project Proposal, Career context statement and the List of Top 10 publications.

Only complete applications will be accepted.

If SpinalCure Australia considers that an application is incomplete, inaccurate, contains false or misleading information, does not provide the required information, provides information in a form other than that requested by SpinalCure Australia, does not comply with these Guidelines, or is otherwise considered ineligible, then SpinalCure Australia may, at its absolute discretion, decide not to consider the application further.

Candidates must use the appropriate template form provided at <https://www.spinalcure.org.au/the-i-peter-farrell-spinalcure-fellowship/> for Parts A (Application form) and B (List of Top 10 publications) for their application to be considered eligible. Detailed requirements and further guidance on completing an application are at Appendix 1.

Part A (Application Form) must be signed by the candidate and countersigned by the Deputy Vice-Chancellor (Research), or equivalent, or an appropriately senior delegate in the nominated Host Institution, before submitting the application to SpinalCure Australia. Following submission, applications cannot be changed unless invited to by SpinalCure Australia.

Candidates requiring further assistance should direct enquiries to their Administering Institution's Research Administration Officer (RAO). RAO's may contact SpinalCure Australia for further information at the contact details below.

Extensions

Requests for application extensions will be considered on a case-by-case basis and must be submitted by email to grants@spinalcure.org.au before the application closing date and time. Requests will only be considered for unforeseen exceptional circumstances. Requests for extensions submitted after the scheme close date and time will not be considered.

Eligibility

SpinalCure Australia will only accept Fellowship applications from eligible Host institutions and eligible candidates.

Host institution eligibility

Eligible Host institutions are defined to be those approved as National Health and Medical Research Council (NHMRC) Approved Administering Organisations².

Candidates must nominate a single Host institution to be responsible for the management of the grant. Overseas applicants may contact SpinalCure Australia for guidance around finding and selecting a host institution.

² <https://www.nhmrc.gov.au/funding/manage-your-funding/mrff-eligible-organisations>

A Funding agreement will be made between SpinalCure Australia and the nominated Host institution of the successful candidate.

Candidate eligibility

Candidates are eligible to apply for the Fellowship if they satisfy the following requirements:

- At the time of submitting their application, the candidate must be an early career, postdoctoral researcher with between three and ten years of research experience, relative to opportunity³, since the awarding of their PhD (that is, the date on which their PhD was approved by the board of graduate studies).
- At the time of acceptance and for the duration of the Fellowship, candidates must either be an Australian citizen, a permanent resident of Australia, or hold an appropriate visa enabling employment in Australia for the term of the Fellowship. Overseas applicants may still be considered eligible if they can demonstrate, to the satisfaction of the FAP, that an appropriate visa is likely to be obtained prior to the commencement of the Fellowship.
- Candidates must not have tenure or equivalent.
- If successful, the candidate shall spend a minimum of 80% of their FTE time on research relating to the fellowship application.
- Candidates must submit an ORCID (Open Researcher and Contributor ID) identifier with their application⁴
- Former recipients of the Fellowship are not eligible.
- Candidates should provide letters of support from 3 external referees.

Industry partner eligibility

Candidates are encouraged to seek partnerships with organisations whose decisions and other actions advance SpinalCure Australia's aim of finding a cure for spinal cord injury. Such partnerships and, potentially, co-investment in the Project proposal from the partner organisation is welcomed, *but not required*, to maximise the impact and value of the Fellowship, and to ensure research outcomes are translated into practice. Eligible industry partners must be one of the following:

- an organisation with an Australian Company Number (ACN)
- an Australian government entity (Commonwealth, State/Territory or Local)
- an Australian charity registered on the Australian Government's Australian Charities and Not-for-profits Commission Charity Register, other than SpinalCure Australia

Industry partners may also be Australian or international organisations that provide the Fellowship recipient with additional or complementary support (including financial support), facilities and/or networking opportunities.

³ SpinalCure Australia uses the NHMRC's *Relative to Opportunity Policy* (including with respect to defining a 'career disruption'), available at https://www.nhmrc.gov.au/sites/default/files/documents/attachments/relative_to_opportunity_policy0720.pdf

⁴ <https://orcid.org/register>

If a candidate names an industry partner(s) in their application, the partner(s) must provide a signed Letter of Support (LoS) consistent with the requirements of Appendix 1). Industry partners will not be considered as contributing to the proposal if their LoS is not provided as part of the candidate's application.

Permissible uses of Fellowship funds

The Fellowship may only be spent on direct research costs (DRC), including salary support and/or on training to build the candidate's capacity and capability to conduct research aligned with the objectives of this Fellowship.

SpinalCure Australia uses NHMRC's definition of DRC and adopts and applies *NHMRC's Direct Research Cost Guidelines*⁵ to SpinalCure Australia's grant program, including for this Fellowship.

Candidates must provide a draft Budget as part of their Project proposal (see Appendix 1) that is consistent with permissible research expenditure under *NHMRC's Direct Research Cost Guidelines*. For example, permissible expenditure may include, but is not limited to:

- a contribution to the candidate's salary and on-costs
 - SpinalCure Australia expects that candidates would qualify as an 'Emerging Leader' (EL) in NHMRC's Investigator Grant scheme⁶, with a corresponding salary.
- other personnel costs, such as for research assistants and technicians
- access to research and infrastructure facilities and technical workshop services
- field research essential to the project
- expert third party services if the services are directly related to and essential for the project including, for example:
 - language translation services, transcribing services
 - purchase of bibliographical material
 - data collection and analysis services
- small equipment (up to \$10,000) and consumables
- publication and dissemination of project research outputs and outreach activities
- specialised computer equipment and software
- travel costs essential to the project, as approved by SpinalCure, and for up to \$45,000 over the project activity period
- web hosting and development essential to the research project
- workshops, focus groups and conferences essential to the project
- reasonable essential costs for researchers who themselves require care.

Fellowship funding may not be used for:

- institutional overheads and administrative charges
- teaching materials
- general infrastructure or capital works
- repayment of student loans (HECS, HELP)
- costs not directly related to the project.

⁵ <https://www.nhmrc.gov.au/funding/manage-your-funding/funding-agreement>

⁶ <https://www.nhmrc.gov.au/funding/find-funding/investigator-grants>

The successful application

The Fellowship is expected to be a full-time award. If successful with their application, the successful candidate must spend a minimum of 80% of their FTE time on research related to the Fellowship application. Participation in teaching and attendance at advanced courses relevant to the Fellowship may be permitted if participation occupies only a small proportion of successful candidate's FTE.

The private practice of medicine and routine clinical or administrative duties are not compatible with the fellowship. Full-time Awardees may spend no more than 20% of their FTE performing routine clinical duties or teaching.

The Fellowship may be undertaken on a full or a part-time basis, subject to:

- written approval from SpinalCure Australia
- approval by the Host organisation's employment conditions, and
- provided that the Fellowship does not exceed six years from the project start date (excluding any approved periods of suspension).

The Host institution is responsible for managing the successful candidate's working hours. The Host institution must seek approval from SpinalCure Australia of any proposed changes to working hours by submitting a written request to vary the hours.

The Host institution must ensure the successful candidate has access to leave entitlements in line with normal practice, including:

- parental leave
- recreation leave
- sick leave
- additional leave of up to twelve months using accrued leave or leave without pay.

Funding agreement

If successful, the nominated Host institution must enter into a legally binding Funding agreement with SpinalCure Australia. A sample Funding agreement, which may be changed at any time by SpinalCure Australia, is available at <https://www.spinalcure.org.au/the-i-peter-farrell-spinalcure-fellowship/>

Any special conditions attached to the Fellowship will be identified in the Funding agreement offer.

Candidates and their Host institution will have 60 calendar days from the date of the grant offer to execute the Funding agreement with SpinalCure Australia. The funding agreement must be executed before any grant payments can be made.

SpinalCure Australia is not responsible for any project expenditure until a Funding agreement is executed.

Specific research policies and practices

The Host institution, candidate and any individual or partner organisation named on the Fellowship application must comply with all relevant laws and regulations and have regard to any relevant guidelines.

Responsible and ethical research practices

A Fellowship application and funded project must comply with the requirements for responsible and ethical research practice, as specified in the *Australian Code for the Responsible Conduct of Research*, and other relevant codes, guidelines, practices and policies, consistent with similar requirements of the NHMRC. Under the Funding agreement, it is the responsibility of the Host institution and the successful candidate to be aware of, and comply with, all relevant legislation and policies relating to the conduct of the grant activity.

Intellectual property

SpinalCure Australia does not claim ownership of any intellectual property in a Fellowship application, or in any research arising from the application.

Publication and dissemination of research outputs and research data

Publications and data arising from the Fellowship must comply with all obligations of the *NHMRC Open Access Policy*⁷.

Publications must:

- be made available immediately upon publication
- be published with the use of an open licence, which means publications can be used and shared widely
- include a data-sharing statement indicating how to access the underlying data or request legitimate access to mediated access data

SpinalCure Australia strongly encourages the depositing of data and metadata arising from the Fellowship in a well curated, openly accessible data repository. A data management plan must be developed prior to the commencement of the Fellowship.

How the grant is paid

Payments will be made as set out in the Funding agreement. Other than under exceptional circumstances and/or where there is evidence of non-compliance with any provision of the Funding agreement of these Guidelines, payments will be made to the host institution bi-annually in January and June of each year.

⁷ <https://www.nhmrc.gov.au/about-us/resources/nhmrc-open-access-policy>

The grant offer will specify the approved grant amount to be paid.

SpinalCure Australia will not pay more than the approved grant amount under any circumstances. If the candidate or Host institution incur extra costs, the Host institution must meet them.

All amounts referred to in these grant guidelines exclude the goods and services tax (GST), unless expressly stated otherwise.

The Host institution is responsible for any and all financial and taxation implications associated with receiving funds.

Review

The award will be reviewed annually. The assessment criteria for the review are:

- Evidence of effective and independent research
- Progress of the research project, including, but not limited to, any milestones
- Efforts to build an independent research career, including any additional funding secured or being sought, new collaborations and plans for the next career step(s).

Advertising and promotion

A dedicated sub-site will be added to the SpinalCure website for the Fellowship, providing full details and promoting the Fellowship through articles on current and past recipients.

The Fellowship will also be advertised on multiple platforms including but not limited to:

- A mainstream press release
- The Spinal Cord Research Hub
- Selected social media channels
- Direct to select Universities, research and key peak organisations
- Via spinal cord injury organisations in Australia and internationally
- Grant databases in Australia and internationally.

As a condition of the Fellowship, the Fellow will agree to be interviewed about their ongoing research plans and progress up to three times during the term of the Fellowship, to inform a news article aimed at promoting the Fellowship and spinal cord injury research in general.

Contact

For further information please email grants@spinalcure.org.au

Appendix 1 – Guide to applicants

Part A. Application form

Candidates must download and fill in the template *Application form* available at <https://www.spinalcure.org.au/the-i-peter-farrell-spinalcure-fellowship/>. The completed form must be submitted as a PDF and must comply with the formatting and other requirements detailed in this Appendix, below.

Part B. Project proposal

Part B (Project proposal) must be a PDF document totalling no more than **ten** A4 pages and must comply with the formatting and other requirements detailed below. The PDF must provide the following information using the headings below and in this order:

- Candidate name (in the format: <First name>, <Family name>)
- Project title
- Project Aims and Background
- Candidate track record and capability
- Project Quality and Impact
- Suitability of the host institution
- Communication strategy
- References
- Budget

Using these headings, candidates should prepare their Project proposal and ensure that information provided under the headings addresses the Assessment Criteria.

Project title

The title should succinctly describe the project, and not exceed 30 words.

Project aims and background

Outline the aims and provide the background to the Project proposal. Include information about national and international progress in this field of research, its relationship to this application, and where and how the Project advances.

Candidate track record and capability

With reference to Part C. *Career context statement* and Part D. *List of Top 10 publications* describe the candidate's:

- record of diverse, high-quality research outputs and their impact, with a focus on those relevant to the project proposal
- capability of candidate to lead a research team and to build collaborations both within Australia and internationally.

Project quality and impact

Describe the project's:

- contribution to an important gap in knowledge or significant problem in the field of spinal cord injury research
- novelty, originality and innovation of the proposed research (including any new methods, technologies, theories or ideas that will be developed)

Clarify the hypothesis(es), theories and research questions and describe the:

- cohesiveness of the project design and implementation plan (including the appropriateness of the aim, conceptual framework, method, data and/or analyses)
- potential impacts resulting from the research, including new knowledge, health and medical impacts for those with spinal cord injury lived experience, commercial, social and/or cultural benefits for Australia.

Suitability of the host institution

Describe the:

- feasibility of the research (including contribution of the project's design, participants and resources to enable the timely completion of the project)
- supportive environment for the candidate and their project
- availability of the necessary facilities to complete the project
- commitment of the institution to supporting and advancing the candidate's career.

Communication strategy

Outline plans for communicating the research results to other researchers and the broader community, including but not limited to scholarly and public communication and dissemination.

This subsection should be no more than approximately one-third of a page in length.

References

Include references cited in the Project proposal only. References may be in 10 point font.

Budget

Provide *and justify* the proposed budget using the following headings:

- Salary and salary on-costs
 - Candidates should refer to *Investigator Grants – Emerging Leadership* rate on the NHMRC Website⁸ for their proposed salary and on-costs
 - Other potential salaries (e.g. for research or technical assistants) must be proposed as a *Personal Support Package(s)*, consistent with *NHMRC's Direct Research Cost Guidelines*⁹

⁸ <https://www.nhmrc.gov.au/funding/manage-your-funding/personnel-and-salary-support-packages>

⁹ <https://www.nhmrc.gov.au/funding/manage-your-funding/funding-agreement>

- Other research costs

- Include non-salary DRC essential to the project, consistent with *NHMRC's Direct Research Cost Guidelines*

- Industry partner contributions (optional)

- Detail the cash value of industry partner contributions
- Provide an estimate of the financial value (\$) of in-kind partner contributions.

Include, as a table under this sub-heading, a summary of key budget items including an outline, line-by-line, of *Other Research Costs* and a *Grand Total*.

The budget, its justification and the summary table should collectively be no more than approximately three-quarters (3/4) of a page in length.

Part C. Career context statement

To assist peer reviewers in assessing track record *relative to opportunity*¹⁰, candidates must submit a Career context statement (the Statement).

The Statement must be a PDF document totalling no more than **two** A4 pages and must comply with the formatting and other requirements detailed below. The Statement should outline the candidate's:

- career stage based on the time since completion of their PhD or equivalent
- career circumstances, opportunities for research and the associated impact on their research productivity
- details of any career disruptions and their impact on research productivity.

The Statement should complement and augment, but not repeat information provided in other Parts of the application. It should include information on:

- research roles, responsibilities, and associated achievements
- career stage and time spent as an active researcher
- how those circumstances affected or contributed to the candidate's research productivity relative to the typical performance of researchers in their field.

It can be helpful to include the importance/esteem of specific journals in the candidate's field; indicators of recognition within their field such as first authorship, prizes/honours, research income and/or the significance of impacts beyond academia.

Part D. List of top 10 publications

Candidates must download and fill in the template *List of Top 10 publications* form available at <https://www.spinalcure.org.au/the-i-peter-farrell-spinalcure-fellowship/>. The

¹⁰ SpinalCure Australia uses the NHMRC's *Relative to Opportunity Policy* (including with respect to defining a 'career disruption'), available at https://www.nhmrc.gov.au/sites/default/files/documents/attachments/relative_to_opportunity_policy0720.pdf

completed form must be saved and submitted as a PDF and comply with the formatting and other requirements detailed below.

In support of their response to the *Track record and capability* Assessment Criterion and their *Career context statement*, candidates must nominate **up to** 10 of their top publications (Top 10) and explain why each publication was nominated. Explanations should outline the publication's quality, contribution to science and/or relevance to the proposed project, and also the candidate's contribution to the publication.

Field weighted metrics and citation metrics may be included within the explanation for each nominated publication. The explanation is not to be used to provide additional track record information (e.g. conference participation, awards, patents, publications not already nominated in the candidate's Top 10), which may be provided elsewhere in the Project proposal, if appropriate. Where possible, a complete citation for each reference should be provided. Where this is not possible, include sufficient citation information to locate the publication such as digital object identifier, journal name, publication title, year and author(s).

Part E. Letters of support from referees and industry partners

Candidates must provide Letter(s) of Support (LoS) from 3 external referees. Where relevant, candidates may also provide a LoS from industry partners. Each individual LoS must be no more than two A4 pages and must be provided as a PDF document. All such letters must be compiled into a single PDF. This compiled PDF must comply with the formatting and other requirements detailed below.

If included with the candidate's application, each LoS must be on the referee's and/or partner organisation's letterhead and must be signed by someone who is authorised to sign and submit the letter on behalf of the organisation. Industry LoS must include:

- A brief profile of the partner organisation
- An outline of how the project aligns with the industry partner's strategic objectives
- The partner's expectations about industry-relevant project outcomes
- Details/information of the Cash and/or In-Kind Contributions from the Industry partner for the project
- Declarations that:
 - the LoS signatory is authorised to sign and submit the letter on behalf of the partner organisation
 - partner organisation will support the proposed project, including with respect to the contribution of staff, funds and/or other resources indicated in the application (subject to the application being successful).

Formatting and other submission requirements

Parts A, B, C, D and E (where relevant) of the Project proposal must comply with the following requirements:

Component	Component requirement(s)
File format	PDF
File size	The PDF file must not exceed 4MB in size
Page size	A4
Header	Candidate surname must be included in the Header
Footer	Page number must be included in the Footer
Font	A highly legible font must be used before converting to PDF such as: Arial, Helvetica, Palatino and Times New Roman, subject to them being an equivalent sized font to 12 point Times New Roman. Text included in figures, tables or pictures must also be equivalent sized font to 12 point Times New Roman
Margins	Pages must have 2cm top, bottom, left and right margins.
Line spacing	Single
Language	English
Part A. Application form	<ul style="list-style-type: none"> Use the template provided by SpinalCure Australia (adhering to character limits and other template requirements) and save the completed template as a PDF file. The PDF file name must be in the form: Surname_Part_A.PDF.
Part B. Project proposal	<ul style="list-style-type: none"> Not exceed ten pages The PDF file name must be in the form: Surname_Part_B.PDF.
References	<ul style="list-style-type: none"> References cited in Part B (Project proposal) can be in equivalent sized font to 10 point Times New Roman.
Part C. Career context statement	<ul style="list-style-type: none"> Not exceed two pages The PDF file name must be in the form: Surname_Part_C.PDF.
Part D. List of top 10 publications	<ul style="list-style-type: none"> Use the template provided by SpinalCure Australia (adhering to character limits and other template requirements) and save the completed template as a PDF file. The PDF file name must be in the form: Surname_Part_D.PDF.
Part E. Letters of support (where relevant)	Letters of Support must be compiled into a single PDF file. The PDF file name must be in the form: Surname_Part_E.PDF.

Webpage addresses/URLs and hyperlinks should only be used under certain circumstances, such publications that are only available online, and in Letters of Support. Webpage addresses/URLs and hyperlinks should not be used to circumvent page limits, nor should they provide information that is not contained in the application. All information relevant to the application must be contained within the application.

Candidates should only include information that is pertinent to the research and note that colour graphs, colour photographs, detailed graphics and grey scale objects may be reproduced in black and white, and should be both necessary and appropriate.