

As with the FIDIC contracts, the employer may himself administer the contract, or may delegate any of his actions to others.

4. Problem areas encountered in landscape contracts

In South Africa the following problem areas can be identified in the field of landscape contracting and landscape maintenance:

- A lack of suitable forms of landscape contract, which, allow for the specific circumstances and problems encountered in the landscape industry in respect of pre-main contract, in-main contract and post-main contract landscape work – refer to the definition of terms hereinafter;
- More specifically, there is a lack of suitable forms of contract between a client and a landscape contractor for landscape work to be undertaken before a main building contractor is appointed and where such landscape contractor may eventually be a subcontractor to the main contractor for the further execution of the landscape work;
- There is also a lack of suitable forms of contract between a main contractor and a landscape subcontractor. Such contracts should however be compatible with the standard construction industry forms of contract generally in use;
- The lack of suitable forms of contract between an employer and a landscape contractor for continuing landscape maintenance and development work to be done after the main building works contract, in which the landscape contractor was a selected or nominated subcontractor. In the absence of a landscape maintenance programme, embodied in an appropriate form of contract between the employer and the landscape contractor, the value or cost of the original landscape installation can be negated within a single season;
- The current JBCC and similar forms of subcontract between a main building or civil works contractor and a landscape subcontractor do not cater for the specific circumstances and problems pertaining to landscape work. An example that can be given is the issue of interim landscape main-

tenance to be done before practical completion has been certified;

- The current JBCC and similar forms of contract between an employer and a main contractor and between the main contractor and his landscape subcontractor do not allow for the continuation of landscape maintenance work between practical completion and the end of the defects liability period nor after the defects liability period had ended;
- The landscape subcontractor having to complete his work in areas already in use by the employer; and
- Financial implications for the employer and main contractor when only the landscape portion of work is incomplete and which delays the issue of the practical completion certificate. This issue becomes pertinent if the value of the outstanding landscape work is very small against the loss of income for the employer and late completion penalties for the contractor.

5. Proposed conceptual contractual systems for the landscaping industry in South Africa

5.1 Pre-main landscape contracts

The landscape contractor may be appointed by the employer to do certain work, before a main contractor is employed, for the following purposes:

- Pre-main contract growing or procurement of plant material; and
- Pre-main contract removal, relocation and conservation of on-site flora and other natural features.

The awarding of one or both of these contracts to a specific landscape contractor does not necessarily imply that this contractor will be awarded the landscape installation or construction contract, which normally is associated with the main project construction contract.

For any of these pre-main contracts, the landscape contractor will most often enter into a direct contract with the employer under

the direction of the project manager and/or landscape architect on the employer's behalf. The latter will undertake work inspections and issue payment certificates.

5.1.1 Growing contracts

The objectives of a growing contract could be one or more of the following:

- To procure or collect the specified plant species at a lower cost, say due to their smaller size, than that of the same species obtainable in retail nurseries shortly prior to their being planted;
- To have the correct species and required number of plants available at the specified time;
- To have plants at the required size available at the specified time;
- To have the plants acclimatised to the intended planting conditions; and
- To provide replacement stock for landscape maintenance on big contracts.

In a growing contract the conditions that will require special attention are:

- Transfer of ownership;
- Work/material insurance;
- Guarantees/liability for planting material – ceases on acceptance of material by the in-main contract landscape contractor; and
- Payment conditions – costs of procurement and plant growing/maintenance costs.

In the technical specifications of a growing contract the essential issues to be addressed include:

- The size plants that will be required on delivery date;
- Specific growing conditions for plants to be cold acclimatised; and

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- Specific horticultural requirements, such as pruning, root development, propagation methods, regular replanting to bigger containers and fertilizing.

5.1.2 Conservation contracts

The objectives of a conservation contract could include:

- To conserve existing flora under threat of building/construction activities;
- To relocate, maintain and replant existing flora;
- To propagate rare endemic species from those that have to be relocated to allow building / civil works activities; and
- To create site conditions before and during site constructions that would prevent environmental degradation such as:
 - Plant cover loss;
 - Soil erosion;
 - Sedimentation of water bodies and courses;
 - Lowering of water quality; and
 - Increase in stormwater runoff.

The following aspects of a conservation contract need to be addressed by means of appropriate contract conditions:

- Where necessary, the transfer of ownership of plant material to be relocated;
- Work/material insurance;
- Guarantees/liabilities for plant material relocated, conserved and replanted; and
- Payment conditions.

In the technical specifications of a conservation contract the essential issues to be addressed should include:

- Authorisations or permits to be obtained from Provincial Government to remove and transport specified rare endemic species covered by law; and

- Specific horticultural requirements of existing flora, such as pruning, root development, propagation and regular replanting to bigger containers.

5.2 In-main landscape contracts

The types of contracts entered into for landscaping work to be undertaken during the period that the main building or civil works contract is executed can be divided into:

- Direct contract between the client and landscape contractor;
- Nominated or selected landscape subcontract between main contractor and landscape subcontractor; and
- Domestic subcontract between main contractor and landscape subcontractor.

Any in-main landscape contract should recognise in its intent and clauses that the installation of the landscape is the first of a two-part process and should allow for a smooth and practical transition to a landscape maintenance contract being implemented afterwards.

5.2.1 Direct contract between the client and landscape contractor

This type of contract requires the landscape contractor to enter into a contract directly with the client, and not through any main contractor, although, normally, a main contractor would be working on the site at the same time.

The purpose of such a contract would be for the client to contract directly with a landscape subcontractor.

The advantages of this form of contract are:

- For the client: no mark up, or attendance, on the landscape contractor by the main contractor;
- For the client: this contract can easily be an extension of a pre-main contract; and
- For the landscape contractor: direct and earlier payment of monies certified.

The disadvantages of this form of contract are:

- There is normally no contra-responsibility between the main building or civil contractor and the landscape contractor. However, it is possible to make reference and state responsibilities in one contract to the other;
- It can be difficult to prove liability or responsibility for damages to landscape work caused by other contractors working in the same areas due to the nature and timing of landscape work in typical commercial type developments. Because of the absence of co-responsibility brought about through a main and subcontractor relationship, the various contractors often do not display due care and consideration for the landscape work in progress. Examples include trenching through landscaped areas, trampling newly planted shrub beds, and damaging irrigation pipe lines; and
- For the landscape architect administering the contract on behalf of the client, it creates an undefined, difficult and time-consuming relationship between himself and other consultants such as the client's principal agent, architect or project manager.

The contractor should also be made aware at tender stage of the fact that other contractor(s) will be working simultaneously in the same area. The tender documentation could provide an item to be priced by the landscape contractor to allow for this situation and possible ramifications.

5.2.2 Nominated / Selected landscape subcontract

The use of nominated / selected subcontracts is very common on larger type construction contracts in South Africa. In this regard Finsen (1999: 117-118) notes that

employers saw the opportunity of getting the best of both worlds, and the nominated subcontract was introduced which enabled the employer to have the benefit of a principal contractor to control the entire building operation (and to assume the risks that went with it) while yet being able themselves to choose specific subcontractors to undertake specific work...

The objective of the nominated/selected landscape subcontract is to facilitate landscape work on a construction project, and where the agreement is made between the main contractor and the landscape subcontractor. In this case it is the main contractor that desires the landscape subcontractor to execute the landscape subcontract works, but normally under the direction and supervision of the landscape architect.

With this form of contract the main building/civil contractor on the instruction of the client's principal agent, typically the project manager, architect, or occasionally the landscape architect, appoints the landscape contractor. The form of contract most commonly used between main contractors and landscape subcontractors in South Africa is the JBCC.

It should be noted that according to the JBCC nominated/selected subcontract agreement only the main contractor and principal agent may issue instructions to a subcontractor. This has the effect that a consultant such as the landscape architect may not issue instructions direct to the landscape subcontractor. The principal agent may however delegate this authority to the landscape architect. It is a recommended practice to have the main contractor countersign all written instructions from the consultant to a subcontractor in order for the main contractor to remain up to date with project variations.

Nominated/selected subcontract agreements have been developed for the more 'traditional' building trades, such as masonry, steelwork and carpentry, and do not cater for the specific nature of landscape work. The following are some of the inherent differences between these traditional building trades and landscape work and the contracts that govern them:

- Using inanimate components as opposed to live matter, such as plants;
- The defects liability for landscape work cannot be applicable if the landscape construction contract is not linked to a maintenance contract;
- For the same reason the standard three-month defects liability period cannot be applicable without some form of maintenance contract after practical completion; and
- Longer-term maintenance contracts are not catered for.

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These intrinsic differences seem to suggest that, although contracts can be changed to suit specific circumstances, these contracts have not been designed to deal with landscape work.

Advantages of the nominated/selected subcontract are:

- The main contractor still retains overall control of the execution of the works; and
- The main contractor has the authority to ensure all subcontractors adhere to the construction programme.

Disadvantages of the nominated/selected subcontract are:

- It is not designed for, nor does it address, the inherent differences between 'building' and 'landscape' work. As retention or a construction guarantee for landscape work is not really applicable after practical completion, the main contractor often holds these against the landscape subcontractor and does not pay certified monies. If a three-month maintenance agreement is included in the subcontract – to coincide with the defects liability period of the main contract – it will, unless special provisions have been made, require additional monthly maintenance payment certificates, which could conceivably delay the completion of the final account; and
- The subcontractor often encounters the following problems within the subcontract agreement with the main contractor:
 - Late payment of certified monies to the subcontractor by the main contractor;
 - Unfair treatment by the main contractor in the sense of being denied certain rights stated in the subcontract and then through intimidation by the main contractor being unwilling to insist thereon;
 - Main contractors going insolvent and not paying over certified monies; and
 - In practice, given that landscape work is mostly executed at the end of a building or civil works project, the main contractor will invariably use the period allocated for landscape works to absorb delays caused by other works to the disadvantage

of the landscape subcontractor, thus forcing the landscape contractor to complete the work in unrealistic time and site circumstances.

5.2.3 Domestic subcontract

The objective of the domestic subcontract is for the client to have landscape work executed under the main contract. Furthermore, the client may elect not to nominate or select a landscape subcontractor due to the following:

- Small size/simplicity of the landscape work;
- Insufficient time to follow the nominated or selected subcontract tender procedure; and
- Insufficient pre-planning of contract programming.

In this form of contract the main contractor appoints the landscape subcontractor directly without any approval by and instruction thereto by the landscape architect or principal agent. No prime cost (PC) amounts are allowed in the tender documents and the subcontractor prices the work from scheduled items. The MBSA non-nominated subcontract, which is compatible with the JBCC Nominated/Selected Subcontract Agreement, is often used – the JBCC does not intend to publish its own domestic subcontract.

The disadvantages of the domestic subcontract are:

- The landscape architect has very little input on the appointment of the landscape subcontractor; often the landscape architect is not even involved in the contract management and works inspections;
- In terms of the MBSA non-nominated subcontract, instructions issued to the subcontractor by the client, or any person acting on the client's behalf, such as the landscape architect, shall have no authority unless authorised by the main contractor; and
- The main contractor loses securities from the subcontractor when interim completion of subcontract works is certified, which has resulted in main contractors being reticent to use this form of subcontract.

5.3 Post-main contracts

For landscape projects the need often exists for a post-main contract after installation of the landscape work to maintain the work through its first critical period. In areas where extreme climatic conditions such as frost and droughts can occur, the survival of the plant material is largely affected by the maintenance care the landscape work receives in this initial period.

Examples abound of so-called 'construct-and-run' projects where speculative developers install the minimum landscaping and on-sell the projects as soon as possible. A typical example of such landscaping is the laying down of instant lawn over soil contaminated by concrete or other cementitious material or compacted by construction activities. Trees are often also planted in minimal size holes without a proper growth medium backfill. In both these examples the short-term appearance will probably deceive an observer, but the landscaping will soon display wilted and discoloured grass and stunted trees. The long-term owners more often than not then have to totally re-construct the landscaping, thereby incurring abortive costs. It is clear that such speculative developers will not appreciate the need for any landscape maintenance contract after completion of the project.

The post-main landscape contract is entered into by the client and the landscape contractor, and is distinctly separate from the landscape installation contract where the landscape contractor was most likely a subcontractor to a main building or civil works contractor.

The landscape maintenance contract cannot be a construction type contract, as issues such as liability for damages to plants due to vandalism and insufficient maintenance need to be spelled out. This is especially applicable for projects that are open to the public and subject to vandalism. It is unrealistic to expect of the landscape contractor to give a landscape construction guarantee, and to accept liability for the landscape installation if there is no maintenance contract between the client and the landscape contractor who installed the landscape originally.

This post-main or maintenance contract, ideally of 12-month duration, must preferably be awarded to the landscape contractor that installed the landscape work in the first place. Various reasons can be given for this recommendation, such as:

- The responsibility for plant defects should be borne by the landscape contractor as he is still on site and cannot disclaim liability for patent, latent or maintenance defects;
- The irrigation systems often require adjustments to cater for differing micro-climatic conditions, such as local swirling winds and overshadowing. The position, direction and height of irrigation emitters also need to be adjusted to cater for growth in plant material;
- Water features, often constructed at huge costs, are notorious for falling into disrepair if not maintained with due care. A period of care by the specialist installer is necessary, also for training the employer's own maintenance staff;
- Constructed ecological systems, such as artificial wetlands and water purification systems often require man's intervention to be sustainable;
- In projects of significant environmental value, long-term environmental maintenance is often an identified environmental issue. The planning and construction approval of large projects are usually conditional upon complying with an Environmental Management Plan (EMP) in which the landscape maintenance and environmental auditing are specified. The landscape maintenance contractor is best placed and qualified to ensure compliance with such requirements; and
- In instances where the employer is able, through his own staff and resources, to maintain the landscaping, a reduced maintenance contract, typically of six-month duration is however still recommended. This maintenance contract's specification can so be worded that there is an overlapping period during which the landscape contractor works alongside the employer's maintenance staff to point out the working of systems and any specific horticultural requirements.

In the specification that accompanies any landscape maintenance agreement, the following items typically need to be addressed:

- Upkeep, adjusting and replacing defective irrigation components;

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- Accepted horticultural practices, such as pruning, fertilising and staking;
- The required programme of lawn mowing, veld slashing, cutting and burning; and
- Seasonal planting of annuals.

6. Recommendations

The following advice is offered to the parties that are involved in landscape work:

6.1 To the developer

- Consider well in advance of the construction of the project if there could be benefits or requirements to have plant material grown for the project or to protect and conserve existing flora on the site. If so, a professional landscape architect is probably the best independent person to advise on the most appropriate form and conditions of contract; and
- Consider the issue of landscape maintenance after the construction phase is finished. Allow in the operational budget of the project for landscape maintenance that will ensure a sustainable landscape or risk the chance that all money spent on the landscape installation could be worthless within a short time. There are distinct benefits to have the landscape contractor that installed the landscape also take on the responsibility of maintaining it for a certain critical initial phase.

6.2 To the employer's principal agent and/or landscape architect

- Advise the client of the advantages of appointing a landscape architect as part of the consultant team;
- Advise the client of the benefits of pre-main landscape contracts such as growing contracts or conservation contracts. Ensure that the critical issues such as transfer of ownership, works and materials insurance, and guarantees are addressed in any such contract;

- If the client can be convinced of the benefits of a landscape maintenance contract, ensure that the tender documents for both the landscape construction and maintenance contracts are simultaneously let. Tenderers are to be made aware of the fact that in evaluating the tenders, although they will be tendering for two separate contracts, the combined tender prices will be considered, and that the successful tenderer will be appointed for both contracts;
- Advise the client to budget for a post-main landscape maintenance contract in the operational phase of the project; and
- Consider the implications of the practical interface of a landscape subcontract with a landscape maintenance contract. Issues to be considered are:
 - Interim landscape maintenance before practical completion;
 - Landscape maintenance in the three-month defects liability period; and
 - Cancellation of the performance or construction guarantee of the landscape subcontractor and settlement of the final account between the main contractor and the landscape subcontractor once practical completion has been certified. It serves little purpose for a main contractor to hold a performance guarantee or any form of retention on the landscape subcontractor if the latter has no mandate to maintain the landscape during the defects liability period.

6.3 To the contractors, both as main and subcontractors

- Ensure that the responsibility for interim landscape maintenance before practical completion is covered with regard to aspects such as cost of water and electricity used and damages to sections of landscaping already completed;
- Reach agreement between the main and subcontractor on when and under what conditions the landscape subcontract will terminate; and

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- The subcontractor should advise the main contractor if he would be able to guarantee the landscape work and be responsible for defects if there is no landscape maintenance contract in place.

7. Conclusion

From the analysis of the forms of contract for landscape works currently in use in South Africa, and the associated problems that have been identified, the authors conclude that whereas all the researched forms of contract have versions that can be used for specialist subcontract works, the specific requirements for a landscape works contract have not been addressed. It is suggested that an addendum titled General and specific conditions for landscape (sub)contract works, be prepared and appended to such contracts.

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