14. Landscaping

14.1 General

Careful attention to hard and soft landscaping at the outset plays a fundamental part in achieving an attractive housing environment. Too often they are an element left out of the design process until other constraints make implementation of a worthwhile scheme impossible. A good landscaping scheme can 'lift' designs by creating a varied, stimulating and satisfying living environment. The opportunity should always be taken to incorporate existing mature soft landscaping in any new development.

The introduction of a theme of street design or landscaping can give a development or area an individual identity. The theme can be a classical form, reflect local characteristics or be an original creative design. The entrances and main areas of movement will particularly benefit from a strong theme with which residents and visitors can identify.

Developers are reminded that the responsibility of creating an acceptable scheme lies in the first place with them. An attitude of 'you tell us what to do and we will do it' is unacceptable, as time and resources cannot be made available. The employment of professional expertise is likely to pay for itself not least in the saving of valuable time.

A fundamental component of the design of the residential environment is the provision of plants, ranging from simple grass planting to retaining fine trees. For the most part, the landscaping of a development will lie outside the highway and general landscape guidance is outside the scope of this guide. However, there are a wide range of landscaping opportunities within the highway which may be exploited both to enhance the highway and to complement the overall design of the development.

14.2 General Principles

The landscape design should include a brief, setting down the principles and aims of the scheme, this shall encompass the entire site, rather than an attempt a piecemeal approach and must involve an assessment of adjacent development and landform. Where an estate adjoins an older development or open countryside, landscaping should seek to integrate the new works into

the locality by the choice of appropriate plant material and by the creation of new landscape features, taking advantage of existing contours or features.

It is not necessary to design fussy details in order to produce an attractive scheme. A simple design with quality detailing often creates the most pleasing impression. The careful use of planting can be especially helpful in defining and giving character to the space associated with it. Attention to planting and the use of interesting surface materials can make the highway environment pleasant to look at and use.

The particular functions of highway trees and planting are to:

- Give the overall design natural scale and form;
- emphasise the character of the chosen highway layout;
- provide contrast to hard surfaces and visual amenity;
- reinforce enclosure and narrowing;
- direct pedestrian flow;
- complement wider landscape design;
- preserve existing site features; and
- reduce noise, air pollutants and provide natural shade

The preferred planting scheme should comply with the following:

- Planting shall be no higher than 0.5m within 1m of the surfaced area;
- If directly adjacent to a footway/footpath the plants shall not be of a thorny species. Thorny species may be used further back in a planting bed to prevent trespass;
- Ground cover planting up to 1.0m high, combined with advanced nursery stock trees (clear stemmed up to 1.8m), is the preferred approach to planting in an urban situation, in order to maintain sight lines and psychological safety for pedestrians;
- Similarly, medium and large shrubs should be spot planted as specimens. Large areas of shrub cover should be avoided, because these can cause security problems and harbour anti-social behaviour ;
- Planting should require little maintenance. Therefore, unless part of a hedge, shrubs should not be planted in locations that will necessitate regular pruning to keep them away from areas use by the public.

14.3 Pre-development planting

Where a proposed development will dominate a landscape by virtue of its visual prominence, provision for minimising any negative effects will be required, this may involve:

- pre-development ‘infrastructure’ planting; the species should reflect the vegetation of the surrounding environment where appropriate, and the aim should link the new development with its surroundings;
- alterations in topography; this may be a useful means of increasing the effectiveness of planting or in producing a variety of landform. It must not however, be seen merely as a technique to dispose unwanted spoil.

14.4 Services Verges

These should be grassed or planted with approved shrubs.
Shrubs are particularly suitable where grass cannot readily be looked after by residents, for example where a verge joins a screen wall. Adopted service verges must be clearly defined on the ground. Where there is no identifiable boundary between the service verge and a private curtilage (for example, in an “open plan” layout) markers of a design acceptable to the Authority should be used. Measures should be taken to ensure that service boxes can be easily identified in planted verges.

No trees may be planted in service verges within areas which will be adopted highway, nor within 1m of a route for major underground service or sewers. Care must be taken when choosing species of shrubs for planting within service verges to ensure a shallow root system thus avoiding potential danger to services.

14.5 Visibility Splays

These areas should be grassed or planted with approved shrubs and form part of the adoptable highway, any such planting must not exceed a mature height of 600mm above the channel on all residential roads. Where footways are provided these should follow the back of the visibility splay. The planting of trees within a 2.4 metres setback visibility splay will not be permitted. At greater setbacks, trees may be permitted for example to retain mature trees or to continue avenue style planting where the species has a narrow girth and a minimum clear stem of 3m to the crown. In these instances the visibility setback should be extended to compensate for the visibility obscured by the tree.

14.6 Other Areas

Areas of amenity, landscape planting, play areas etc. will not be adopted by the Highway Authority nor will grass verges of less than 900 mm in width will not be adopted, and the Developer must therefore make suitable arrangements for their future maintenance.

However, where planting can be shown to relate to a particular highway feature or function (e.g. traffic calming) it may rank for adoption by the Highway Authority. Landscape planting specifically for highway purposes may be justified on Local Distributor roads where the public pass and re-pass frequently. On these, road verges may be 3 metres wide (excluding footway if provided) in order to accommodate planting. Nevertheless, the general principle of keeping verge widths to a minimum is emphasised.

Angles formed by walls, fencing and hard landscaping can be unappealing and create maintenance problems. However, where planting is used effectively, these 'dead' areas can be transformed, and if the planting is carried through to the highway verge, it can break up to linear appearance of the road.

Tall dense shrubs or particularly thorny planting species are not acceptable immediately adjacent to pedestrian/cycle routes.

14.7 Materials

The quality and variance of hard landscape materials such as surfacing, kerbing, paving, combined with landscaping including trees, shrubs and grass will help create the character of the area. An attractive varied landscape can provide a positive sense of identify. It can reduce the predictability of the design in different areas and in different streets.

14.8 Trees

The species of trees selected should not cause damage to adjacent pavings, buildings or services underground or protection should be provided. Paving design and tree species should be chosen together, with non-slip paving used under trees to reduce slip hazards in autumn. In addition the trees selected should not create droppings that form a slippery surface for pedestrians, or could cause damage to the paintwork of cars parked beneath. Suitable tree species should be selected for their site surroundings taking into account their ultimate crown size and form.

Trees should be planted at least 1 metre back from the carriageway or footway edges within a minimum 3 metre verge to afford clear passage to all highway users without the need for extensive future lopping.

Tree pit construction should ideally have root barrier material or root directors included to help prevent physical lifting of the surrounding surfaces. There design should prevent surface water run-off draining into the tree pit, as in winter de-icing salt water run-off will contaminate the soil and kill the trees.

Trees planted within the highway verge will generally be single specimens planted as standard or extra heavy standard stock. A list of trees that are generally suitable for roadside planting is set out in Appendix 3. The trees are categorised by suitability for narrow verges (over 3.0 metres) and wider verges (over 6.0 metres). The list is not exclusive and Developers are advised to discuss any proposal with Officers of the Council. Other deciduous trees may be considered favourably depending on such factors as bulk in maturity, longevity, period in leaf, and root behaviour.

Some species of tree have many varieties and cultivates, including those having particular characteristics required for trees in confined spaces. These varieties sometimes have the additional advantages of being less vigorous than the original species.

The selection of trees should relate to the wider style of the overall landscaping scheme. While there may be scope for ornamental stock in urban or suburban settings (e.g. Prunus Serrulata – Japanese Cherry), more use of native or well-established forest and hedgerow trees would usually be sought in the rural location (e.g. Prunus Avium – Gean/Wild Cherry).

14.9 Shrubs

Appendix 3 contains a list of shrubs which are suitable for planting in highway verges. Whilst these are low growing there may be opportunity to plant larger shrubs outside visibility splays and service verges where it is desirable to create a sense of enclosure. However, species that will grow above 1.0 metre will not be favoured.

Shrubs should be massed in beds where possible: complex designs create maintenance problems.

14.10Grass

The correct selection of seed is important to ensure that the grass species will suite the type of soil, function and maintenance requirements of the area ‘Flat’ areas must not be flat or dished, unless the design incorporates land drains, but should be domed slightly. For maintenance reasons the maximum gradients of slopes should be 1 in 5 with a 500mm minimum width transition gradient adjacent to level areas and hard surfaces. Grass should not be laid hard up against vertical structures as mowing against them is impracticable.

A mowing strip (minimum width 225mm) should be provided to obviate the need for an additional expensive edging operations. In addition potential obstructions such as fence posts, sign posts and lamp posts should be sited in areas of paving or be surrounded by mowing strips.

Grass strips between footways and carriageways, and small and isolated shrub beds, whilst attractive if well maintained, are often neglected and overrun by vehicles. Where this cannot be avoided additional measures such as high kerbs or bollards set in a paved strip may be a solution. Such measures must take into account the proposed function, configuration and visual character of the road. In some situations it may be better to provide a hard textured surface instead.

The general level of grass areas should always be 10mm higher, (after settlement) than surrounding hard areas, including kerbs to facilitate mowing. Adequate access for mowing machines must be allowed. Where an area is large enough to justify using gang mowers, access of at least 3.0 metres width must be available and curves of not less than 5.0 metres radius provided.

Grass should not be used where heavy wear from pedestrians is likely. In these areas hard surfacing should be provided.

14.11Security

Security is of great concern to all, therefore landscaping should avoid creating high-risk areas of shade and screening. A sense of security is best achieved by limiting the planting palette to ground cover species, clear stemmed trees (upto 1.8 metres) climbers and grass. Co-ordination between the landscape design and street lighting layout, car parking zones and footpath/cycleway alignment is essential.

No trees or shrub species may be planted where at their mature size, they will obstruct street lights or road signs. Care should be taken not to create areas that give cover to those with criminal intent. To this end both hard and soft landscape should be kept below, or above, a height or density that would shield people moving around car parks. Tree planting is acceptable providing suitable species are chosen i.e. clear stems, non-dripping species and no heavy fruiting trees.

14.12Preservation

The Highway Authority recognises the desirability of retaining existing trees and hedgerows and should these be affected in anyway by the development the Local Planning Authority (LPA) must be consulted.

At the initial stage of a scheme an accurate tree and hedgerow survey should be made; the developer has a legal responsibility to check with the LPA before work commences on site for any Tree Preservation Orders, or

hedgerows protected by similar orders. The survey should include details of species, position, height, condition, canopy spread and girth of all trees. Trees and hedges in good condition should be considered for retention with new landscape proposals.

To ensure the survival of existing trees the following conditions should be observed:

- wherever possible, services should be arranged to avoid being under tree canopies or between their root systems, and new roads should be designed with care where they have to be in close proximity to existing trees. Where this cannot be avoided then trench-less-technology should be used to pass under the tree root plates to prevent damage. Particular care should be taken to ensure that the ground levels and drainage patterns adjacent to trees is maintained as existing over the area of their root systems or adjoining the base of their trunks.
- trees should not be subject to alterations in existing ground levels over the area of their root systems or adjoining the base of their trunks;
- all excavations under canopies should be carried out by hand and no roots over 25mm in diameter should be severed or damaged;
- no materials must be stored within the trees protected area (BS 5837)
- where buildings are to be placed close to large trees considerations should be given to the construction of a ground wall. The ground wall should be at an adequate depth in the ground and of sufficient length to safeguard the protected structure. The top of the wall need not be visible above ground level;
- it may be desirable to prune the crown of a tree, with the LPA's consent to make it safe and lift lower branches above vehicle and head height;
- the protection of trees and hedges during site construction is essential. Specific advice on tree protection will be given by the LPA; and
- Arboricultural Consultants should be employed throughout the construction process to ensure compliance with the above and where the health and safety of existing trees is to be safeguarded and monitored.

14.13Future Maintenance

The Highway Authority has strictly limited facilities for the maintenance of soft landscape and will not accept within the highway adoption boundaries planting which requires complex or specialised treatment.

Weed control in landscaped areas is essential for its good establishment, and this should form part of the initial maintenance plan, mulching with bark mulch or mats or geotextile sheet can help cut down the cost of weed control until the areas of landscaping become well established. To reduce the need for

weeding after planting, the planting beds should be fully prepared and treated before cultivation to remove or kill all perennial weed roots prior to planting.

14.14Land drainage

The topography and soil types prevalent in the York area mean that sites are very often difficult to drain, and prone to waterlogging. While these problems may have been addressed satisfactorily for agricultural use by the construction of herringbone pattern drainage systems and field ditches, subsequent development of such sites can often destroy such systems. As a result, problems are experienced by householders with waterlogged gardens for which there is invariably no solution.

Where a potential problem is indicated by the nature of the site, this should be taken into account, particularly in the design of residential developments. Solutions should be considered that would drain the land satisfactorily for its proposed use. This may require a land drainage infrastructure which would not be adoptable so prospective purchasers should be made aware of their liabilities. It should be noted that Yorkshire Water Services will not permit the connection of land drainage into their surface water sewerage systems.