

Site Design

General Objective

- 5.1 The objective for site planning shall be to provide a predominantly rail-connected warehousing and industrial development with associated landscape works of a high design quality similar to that achieved at DIRFT already. New buildings and landscaping shall be capable of future maintenance to ensure enduring design quality.

Development Density

- 5.2 Buildings should normally cover no more than 50% of a plot within the development. However, a higher density may be acceptable for rail served units (up to 65%) given the individual characteristics of this form of development. A minimum of 10% of a plot shall be set aside for landscaping.

Parking

- 5.3 Parking shall be provided in accordance with Supplementary Planning Guidance on Parking (NCC, March 2003). Where acceptable to the local authority, if an occupier has a need for a lower number of parking spaces than the standard requires, then this provision need not be included or land will be set aside for the provision of the surplus parking, but not implemented until a time when demand requires it whether this be by the original or future occupants of the unit.
- 5.4 The parking and servicing areas shall be contained within the secure areas of each plot, shall be set out to meet the needs of the occupiers, and be in compliance with the latest Freight Transport Association (FTA) Guide (Figure 7).

Sustainable Building Design

- 5.5 Development plots shall be capable of accommodating a wide range of unit types and sizes to cater for the individual needs of potential occupiers. The developer shall accommodate the needs of the logistics industry whilst ensuring that sustainability objectives and considerations are achieved.
- 5.6 Buildings shall be designed within the Expansion Site to:
- Maximise the efficient operation of the building in terms of rail / road interchange of goods;
 - Establish a minimum of 10% of the Expansion Site for high quality landscape treatment;
 - Maximise as far as practicable, the mitigation of visual and noise impacts.
 - Incorporate waste management to minimise waste and secure opportunities for the reuse and recycling of materials. Any waste management facilities shall be located to facilitate convenient separating, storage and collection of waste.
 - Provide opportunities for sustainable building/layout and design (e.g use of natural lighting, solar gain etc); and
- 5.7 Schemes for commercial / industrial buildings over 1,000sq.m shall incorporate renewable energy schemes which provide for at least 10% of their energy requirements. This might include, for example, incorporating solar photovoltaics, wind turbines etc.¹

¹ Developers are advised that The Carbon Trust provide energy efficient advice to businesses (see further information on page 37).

5.8 The following Section provides further sustainability measures, which shall be incorporated as appropriate. Developers will be required to demonstrate that they have adopted sustainability principles via their planning applications. Examples of measures for consideration include:

- Building in flexibility to increase the life span of buildings.
- Setting objectives for the design and layout of the buildings to optimise the BREEAM rating appropriate to its use.
- Use of wood from sustainable forestry.
- Minimise air leakage.
- Incorporate openable windows for natural ventilation.
- Incorporate facilities to increase natural day lighting and increase solar gain.
- Provide high standards of insulation.
- Establish an energy use strategy, potentially including the incorporation solar panels on office elevations.
- Apply low consumption water supply fittings, including spray taps, low flush appliances and automatic controls.
- Incorporate 'grey water' measures to re-use rain water within buildings and within plots (eg. for landscape waters)

5.8 Developers shall include measures to reduce pollution from buildings and attention is drawn to the Environment Agency's Pollution Prevention Guidelines.

Materials

5.9 In order to continue the design approach already established at DIRFT, the same range of materials, profiles, and colours that can already be seen on the existing buildings will be encouraged. These include the following:

Roofs:

Profiled metal roof sheeting or insulated composite panels in Goosewing Grey (BS 10A05), with parapet screening. Parapet to be a continuation of the walls. However, developers shall consider the visual impact of roofs from elevated longer distance views, and if appropriate the developer shall incorporate a darker roof colour in a shade of green to be agreed with the Local Planning Authority.

Walls:

Profiled metal wall cladding or insulated composite panels in a range of neutral shades including but not exclusively White (BS 00E55), Hamlet (RAL 9002), Goosewing Grey (BS 10A05), and Albatross (BS 18B17), Oyster (RHL 7035), Alaska Grey (RHL 7000), and Merlin Grey (HPS 200).

Windows:

To suit occupier requirements, but generally polyester powder coated.

Doors:

Thermally broken frames with Pilkington 'K' glass or equivalent double glazing to meet the latest thermal and environmental regulations.

Colours:

The doors shall also be in neutral shades and shall include the shades listed above for the walls.

Loading:

To meet the occupier's requirements, but again designed to meet current regulations.

Plot Boundary Treatments

5.10 The boundaries to the development plots will continue the style established at DIRFT, which has contributed to low crime rates at DIRFT, with galvanized steel palisade fencing to the security sensitive areas of the individual plots, with chain link fences to the other plot boundaries.

External Lighting

5.11 The external lighting design guidelines serving the DIRFT Expansion Site can be found at Annex 5: Lighting Guidelines, to the rear of this document. Attention is also drawn to Developers of the proximity of a small number of residential properties.

Drainage

5.12 The expansion of DIRFT can be accommodated with due regard to flood risk. This has been established by the Environmental Impact Assessment (EIA) completed in respect of the outline planning permission. Notwithstanding this,

Flood Risk Assessment will be required to accompany applications for Reserved Matters Approval or full planning permission pursuant to the outline planning permission in order to demonstrate that the detailed design of buildings or site infrastructure falls within the parameters assessed by the EIA.

5.13 Flood Risk Assessments will be required to comply with the guidance contained in Planning Policy Guidance Note 25: Development and Flood Risk (DTLR, 2001).

5.14 The Sustainable Drainage System principles already established at DIRFT shall be extended to the Expansion Site. Detailed proposals for development shall be accompanied by schemes for the provision of surface water run-off limitation for approval by Daventry District Council.

5.15 In order to maintain access to water courses for maintenance and improvement purposes new buildings and structures shall not be located within 5 metres of the top of the bank of any water courses.

5.16 Prior to being discharged into any water course, surface water sewer or soakaway system, all surface water draining from lorry parking areas or car parks of 50 or more spaces shall be passed through an oil interceptor compatible with the site or plot requirements.

Services

Electricity

5.17 A 33 kv underground electricity cable will be laid from Hillmorton,

near Rugby, to the existing primary electricity sub-station at DIRFT Central. From this sub-station, the Expansion Site will be supplied by underground cables alongside the A428 and A5.

Gas

5.18 The existing gas main is located beneath the A428. A new gas main will be provided to the expansion site by extending the existing network which is served from a transmission main to the east of Crick.

Water

5.19 A new large diameter main will be provided by extending the existing network which currently terminates at the junction of the A5 and A428. The developers of each plot will need to consult Anglian Water at an early stage to discuss their requirements

Sewers

5.20 A new gravity sewer shall be connected to the existing foul water rising main from Crick Village to Rugby, via the pumping station located at DIRFT South.

Telecoms

5.21 An extensive network of telephone cables presently runs along the A428 and A5 link road. Underground cable ducts will be installed between the expansion site and existing cables to allow telephone and data connections to the network.

Signage

5.22 A Signage Strategy has been established at DIRFT and this shall be continued within the Expansion Site. Estate signings and building occupier directional signage should reflect the style of signage already erected (see Photo 1).



Photo 1: HGV entrance / exit signage

5.23 Within individual development plots, direction and advertising signage on buildings, should, match the style of signage already established at DIRFT (see photo 1) i.e there shall be a maximum of one sign to one elevation. This shall be non-illuminated and mounted on the building. Signage should enhance, and not detract from, the quality of the development and setting as a whole. The District Council will use its development control powers under the Display of Advertisement Regulations to seek to maintain signage consistency.

5.24 The Expansion Site should be clearly signposted from the surrounding road network in the same way as other DIRFT sites. An HGV routing strategy has been agreed with the Highways Agency and Northamptonshire County Council (see Annex 6).

Access for Emergency Vehicles

5.25 Additional site access points may be required for emergency vehicles to internal site circulation roads or the external road network. The location of the additional access points should be agreed with the District Council in consultation with the emergency services. The surface treatment of the accesses and any gates to be incorporated should be unobtrusively designed.

Landscaping

Landscape Strategy

5.26 A Landscape Strategy has been developed for DIRFT and the subsequent expansion areas. The strategy is intended to respond to the identified needs for mitigation in respect of landscape, ecology and visual impacts from long and short distance view points, and thus help to minimise the affects of the proposed development on the site and its surroundings. Opportunities to enhance bio-diversity (see paragraph 5.65) shall also be introduced.

- 5.27 The following is a summary of the key elements of the concept:
- i) Retention of existing planting where possible within the Expansion Site, along roadsides and site boundaries (refer to Photo 2).
 - ii) The replacement of any trees lost within the Expansion Site as a result of the development.
 - iii) Supplementing boundary hedgelines where hedgerows are broken.
 - iv) The extension of existing tree belts and shrub areas on the south-west boundary.



Photo 2: Existing planting along roadside

- v) Ground modelling designed to be sympathetic to the local landscape character.
- vi) Structure planting of native tree and shrub screens on development site boundaries, and where appropriate to the local landscape character, on elevated ground-modelling.
- vii) The use of evergreen species to be kept to a minimum and mixed with native species. Blocks of evergreen and/or the use of Leylandii will not be acceptable.
- viii) The formation of balancing ponds if appropriate in such a way that they create a new wildlife habitat and provide a landscape and visual enhancement to the development area.
- ix) The alignment of watercourses to be as natural as possible, with a bank and margin treatment that is both sustainable against erosion and an amenity to wildlife and the landscape.
- x) Re-creation of a newt sanctuary within a newly-formed nature area.
- xi) Semi-native tree and shrub planting to internal site roads and footpath/cycleways.
- xii) More ornamental planting to be employed at the entry to, and within the confines of, individual development plots, in particular at entrances to offices.

Photos 3, 4, 5 and 6: Existing structural landscape



Photo 3



Photo 4



Photo 5



Photo 6

5.28 Consideration shall be given to the future planting of native woodland ground flora along wooded corridors should such corridors become established.

Structural Landscape

5.29 Overall cohesion, co-ordination and quality of the development shall be achieved by the establishment of a structural landscape that will seek to ‘break-down’ the expanse of the development site into smaller elements.

5.30 The structural landscape shall reflect and build upon that already established at DIRFT, as shown on Photos 3-8 with priority being given to native species. A Structural Planting Species List is attached at Annex 1. The structural landscape will perform the following functions:

- i) Reduce the impact of the development from any short views from adjacent and surrounding roads, public footpaths and cycleways, and viewpoints
- ii) Soften and screen the outline of the distribution warehouses from long-distance views
- iii) Screen the storage containers wherever possible



Photo 8: Species of plants to be used

- iv) Provide a landscape separation between development plots
- v) Enhance the character of the Expansion Site’s circulation routes for both road users, cyclists and pedestrians
- vi) Extend the potential habitats for wildlife
- vii) Provide an attractive setting for those working at, or visiting the site

Boundary planting

5.31 Species employed in the structural planting mixes on the boundaries of the development will essentially be native/indigenous, with some semi-native varieties introduced where appropriate to fulfil functions not achievable by the use of pure indigenous mixes, e.g. certain



Photo 7: Existing structural landscape



Photo 9: Species of plants to be used

evergreens to give all-year round screening (see Annex 2 and para 5.27 (vii)).

5.32 Linear blocks of structural planting will be utilised to soften the internal plot boundaries, positioned to radiate out from the distributor roads to create individual compartments. Where there is limited space, hedges will be established to straddle security fences on these boundaries. Species employed in the planting mixes between development plots may contain more semi-ornamental species as appropriate to achieve an attractive screen.

Estate Road Landscape

5.33 A 'parkway' style of landscape treatment will accompany the development of the site's highway infrastructure. Planting schemes will

be bold and imaginative but with a degree of consistency throughout the infrastructure. A palate of native and ornamental plants will be used to form a link between the development site boundary landscape and the more ornamental planting of development plots, whilst providing visual amenity and spacial containment to the road scene. Refer to Photographs 10, 11, 12 and 13 and Annex 3 for species list.

5.34 Gentle mounding shall be introduced where landscape design character dictates to create further interest within the landscape and to help 'soften' the visual impact of large buildings, while providing a human scale for road users, cyclists and pedestrians. However, such mounding shall be kept to a minimum and contours shall not exceed 1:25



Photo 10: Species of plants to be used



Photo 11: Species of plants to be used



Photo 12: Species of plants to be used



Photo 13: Species of plants to be used

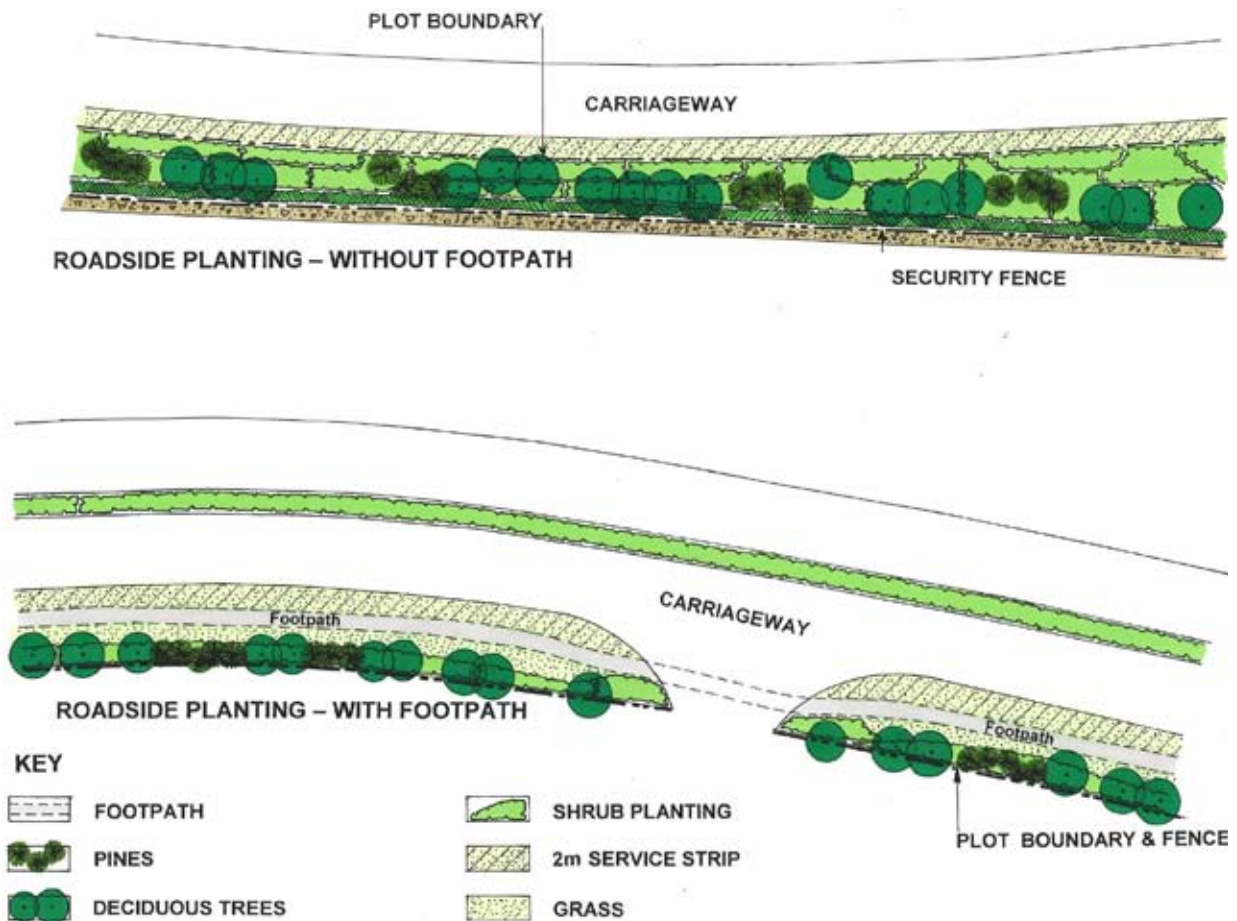


Figure 8: Estate Road Landscape Plan

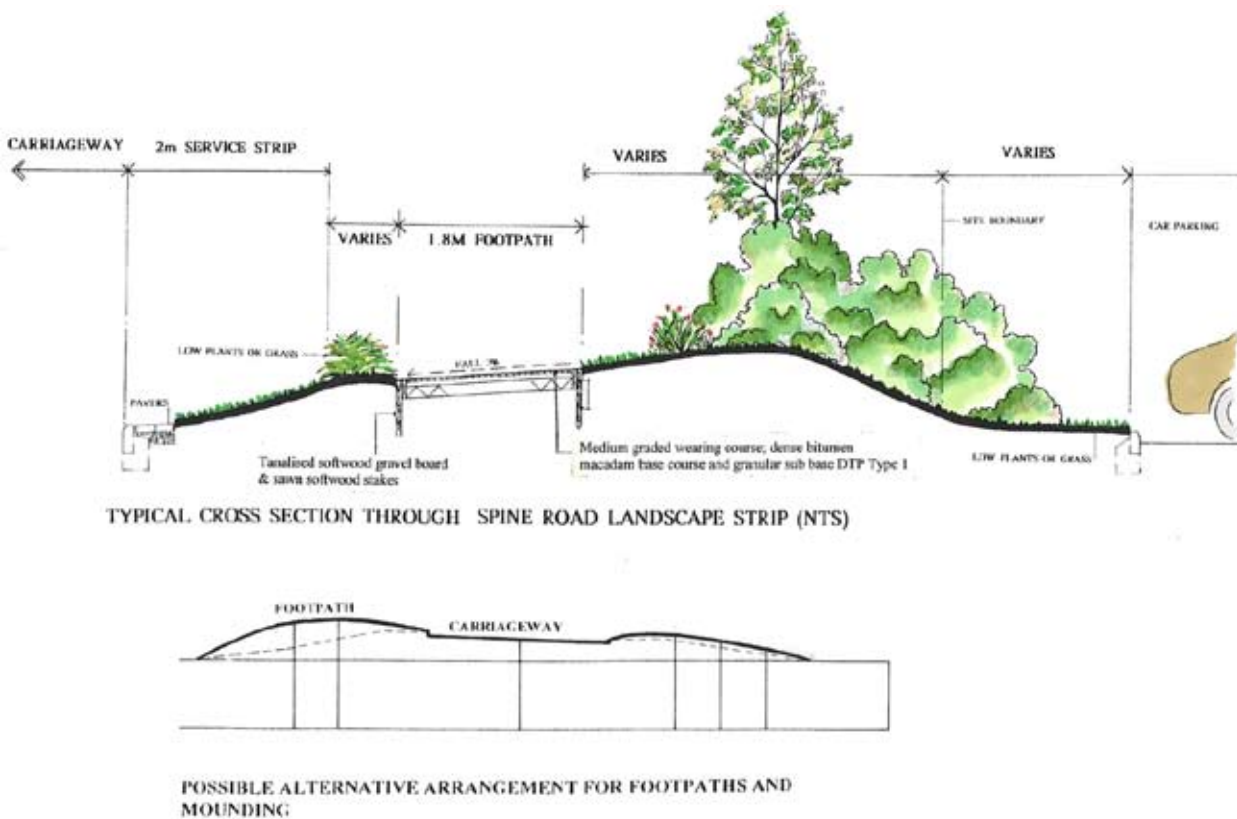


Figure 9: Estate Road Landscape Section

on the outer slope and 1:5 along the inner slope unless required for reasons associated with ground engineering.

5.35 The pedestrian/cycle routeways shall be restricted to one side of the estate/spine roads wherever possible to allow for a greater width of soft verge. In addition, where possible, footpaths and cycleways shall not always be set immediately adjacent to road kerbs, but will be set next to an attractive landscape dividing strip between the pedestrians/cyclists and vehicular traffic. This aims to improve the walking and cycling environment of the site and to provide ease of access for pedestrians/cyclists getting to work. Care shall be taken to ensure such areas are subject to surveillance from roads, in order to provide safe attractive routes. An illustration of such an arrangement is given in Figure 8.

5.36 There shall be generally a min. 2.8m wide grass strip on at least one side of the estate road carriageway. The strip will serve as a defined route for underground services. Between the service strip, or footpath/cycleway where provided, and the development plot boundary fence, there will be a height-graded planted strip to act as a visual amenity as well as a screen to any plot boundary security fence and HGV parking areas. Refer to Figure 9. The provision of planting screening to plot boundaries shall be designed and implemented with reference to Supplementary Planning Guidance 'Planning and Crime' and the ODPM's 'Safer Places: The Planning System and Crime Prevention'.

5.37 Where roundabouts are to be provided on estate roads, these shall be planted using species similar to those employed on the estate roads (Annex 3). Adequate sight-lines shall be maintained. The outer circle of the roundabout will usually be in a hard surface behind a high kerb, in case of vehicle over-run. At strategic roundabouts, a 'Gateway Feature' may be included. A soft landscape gateway feature is preferred e.g specimen tree(s). Refer to Figure 9.

5.38 Depending on predicted traffic flows and circulation, it may be necessary to provide dual carriageways on some estate roads. The central reservation on such roads will be planted with ground-cover shrubs to soften the expanse of carriageway, and to provide safety in the form of a physical deterrent to pedestrians and vehicles that might be tempted to cross at hazardous crossing points.

Development Plot Landscape

5.39 Within the development site, plots of appropriate size will be identified to serve particular business users. Generally these plots will contain the following elements:

- i) Distribution/warehousing/ industrial units
- ii) An unloading/loading area for articulated vehicles
- iii) HGV parking
- iv) A railhead with unloading/loading facilities
- v) Security fencing
- vi) A divided entry to the HGV area/ warehousing with security hut

- vii) Offices, physically linked to the warehousing
- viii) Car parking to serve the offices and for visitors within a secured area
- ix) A separate car park access
- x) Tanks to serve water sprinklers.



Photo 14: Existing islands of planting



Figure 10: Typical Roundabout Details

5.40 Opportunities to incorporate landscape planting shall be fully considered for the distribution/warehousing/industrial units and associated loading and HGV parking areas. The facades of units that do not require an HGV interface, however, will be screened or softened by the planting provided on site/plot boundaries or estate roads. Where it is necessary to provide a fire access around the building, this will be surfaced in a form of reinforced grass or bound gravel to reduce the volume of tarmac and concrete on the site.

5.41 Beyond the kerb-line of HGV parking/loading areas, there will normally be a 1.00-2.00m wide gravel strip to allow for over-riding and pedestrian access behind vehicles. If space and security permits, beyond the gravel strip there will be shrub or hedge planting to give some softening/screening to the internal face of security fencing.

5.42 The car-parking areas will be visually broken-up by the provision of islands of planting containing trees and shrubs (refer to Photograph No. 10). Surrounds to car parking areas will be landscaped with swathes of lawn encompassed by meandering banks of shrubs and trees to give a welcoming environment and a parkland feel.

5.43 Plant species to be utilised within the confines of a development plot will be wildlife-friendly, native or semi-native species, with opportunities to incorporate small elements of ornamental or semi-ornamental species, combining colour, texture and form to provide a variety of

interest throughout the year (see Annex 4 and para 5.27 (vi), (xi) and (xii)). There will be a large percentage of evergreen species, with low ground-cover towards the front edge of planting blocks, and larger shrubs with trees towards the back. Bulb planting will be introduced to grass areas to provide colour in the Spring.

5.44 The surrounds and approaches to the offices from the car park areas will be planted with ornamental flowering species of shrubs and herbaceous plants to provide more detailed interest.

5.45 A feature such as a pond or other specialist landscape element is envisaged close to the offices/visitors entrance.

Hard Landscape Materials

5.46 The hard landscape materials to be employed within the development may be divided into the following categories:

- i) Surfacing materials, kerbs and trims
- ii) Enclosures
- iii) Street furniture
- iv) Lighting and signage (see External Lighting above)

Surfacing

5.47 The estate roads will be surfaced with bitumen macadam with a standard road kerb. Where there are entrances with tight turning radii into parking/loading areas for HGV's, it may be necessary to employ high protection kerbs to prevent rear axles over-riding the kerb-line.

5.48 Roundabouts will be edged with granite kerbs and an approx. 1.0m wide circle of granite setts or similar, as shown on the illustration Figure 11.

5.49 Footpaths/cycleways are to be 1.8m wide, surfaced in bitmac and edged with concrete pin kerbing or tanalised timber edging. Please refer to the cross-section on Figure 11.

5.50 Within car park areas on development plots, small unit paviments may be employed in selected areas as an alternative to tarmac. Pre-cast concrete units will generally be employed on pedestrian routes from the car park to the offices.

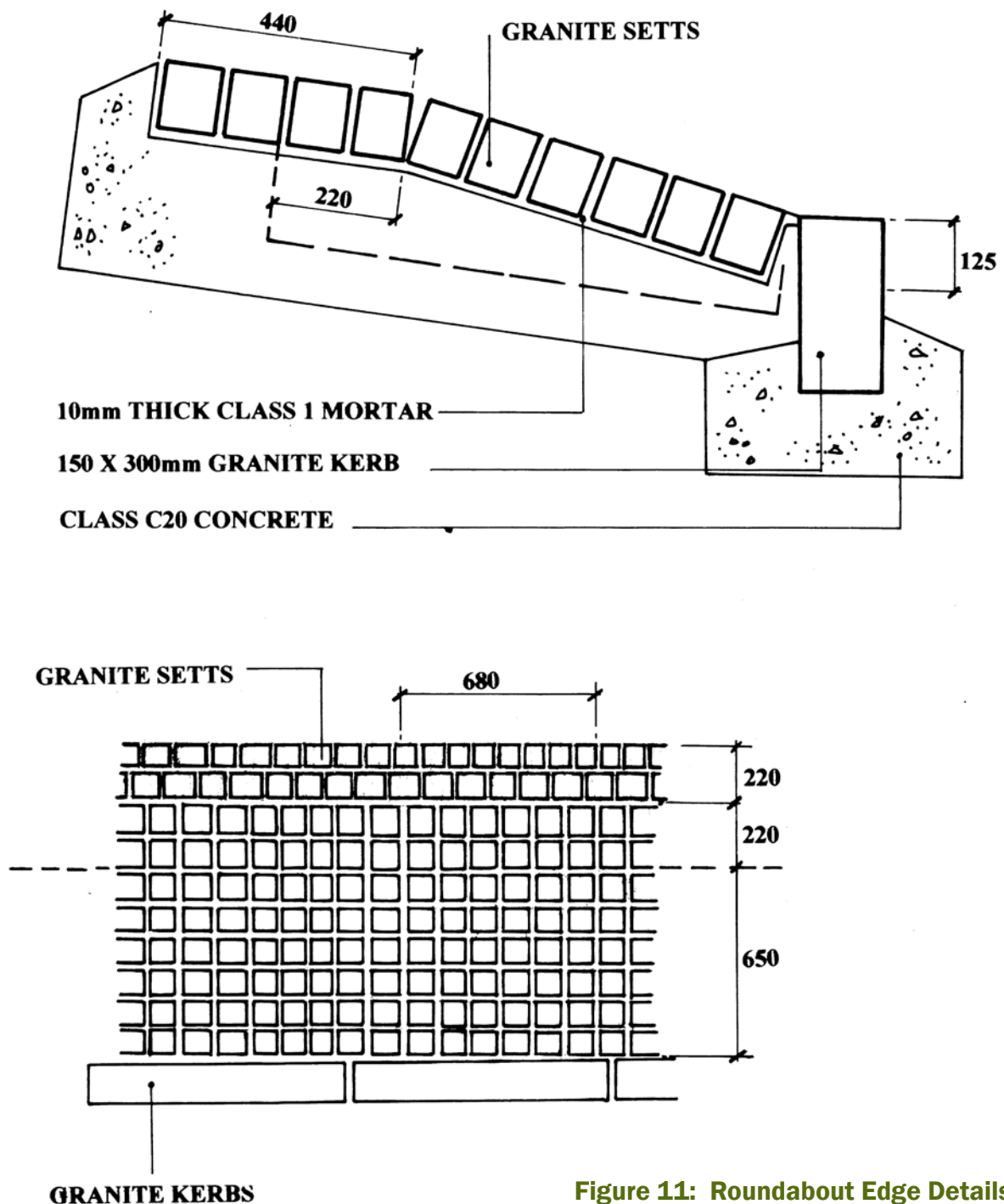


Figure 11: Roundabout Edge Details

Enclosures

- 5.51 2.0-2.5m high site security fencing of the galvanised steel palisade type will normally be required around the perimeter of working areas and may be supplemented by surveillance equipment. Where fences are needed for safety around water features or as a demarcation, timber post-and-rail ranch-type fencing shall be employed.
- 5.52 Where ornamental planting or grass areas are likely to be vulnerable to wear by the short-cutting of pedestrians, a simple timber trip-rail may be installed to protect the landscaped area.
- 5.53 Boundary planting or off-site planting that requires protection against animals shall be surrounded with tree guards and/or stock-proof wire fence enclosure 1.2m high, as appropriate.
- 5.54 It may be necessary to introduce vehicle crash barriers on through roads where land levels fall away sharply beyond kerb-lines.

Street Furniture

- 5.55 Within development plots, a minimum of one bench seat per plot shall be provided within the landscaped open spaces, in order to provide opportunities for employees/visitors to rest/wait. This will be designed/selected to co-ordinate with their surroundings.
- 5.56 In addition, as employed on established areas of DIRFT, large boulders will be strategically placed behind road kerbs at potentially vulnerable areas to prevent the parking or over-riding of vehicles on road verges.

Landscape Management

- 5.57 As achieved on the initial phases of DIRFT, the main peripheral structural landscape shall be put in place in advance of the development of the building plots. By this means, the development site will become more effectively screened. Furthermore, some screening/softening of the construction works shall be afforded by the early ground modelling, where appropriate and planting undertaken around the boundaries of the site.
- 5.58 The remaining landscape works shall be implemented as each development plot is completed. The implementation contracts will include for the maintenance of the landscape for the first 5 years following installation to ensure its establishment.
- 5.59 A Landscape Management Plan shall be prepared for the care of the structural landscape following its establishment. The main objectives of the Plan will be to:
- i) ensure high quality screening of the development is achieved and maintained,
 - ii) establish visually interesting and wildlife-friendly species of vegetation throughout the development site.
- 5.60 The Landscape Management Plan will aim to meet these objectives by providing a framework of specific maintenance measures to be regularly carried out over the longer term.

5.61 The maintenance framework will include that:

- i) All initial planting which fails to survive or thrive will be replaced.
- ii) Proper measures will be taken to ensure the successful establishment of the planting. For example, after a number of years it will be necessary to thin some tree belts to create suitable growing conditions for the main woodland species.
- iii) Landscaped areas along site boundaries and estate roads will be maintained in the future in accordance with good horticultural and estate management practices and in such a manner so as to be harmonious throughout the development as a whole.

5.62 In order to establish the new planting and properly conserve existing vegetation, it will be necessary for a comprehensive management programme to be drawn up, which will form part of the Landscape Management Plan.

5.63 A Management Company will be appointed, whose tasks will include the overseeing of the Landscape Management Plan and the contracting and supervision of the long-term landscape maintenance of the structural landscape.

5.64 The landscape internal to each development plot, will be handed over to the site owner/occupier, who will make his own arrangements for its continued maintenance in accordance with the Landscape Management Plan.

Biodiversity

5.65 All landscape proposals shall include opportunities for habitat creation aimed at increasing local biodiversity. Developers are referred to the Northamptonshire Biodiversity Action Plan for guidance. Opportunities shall be identified to provide woodland planting, hedgerow enhancement and grassland areas, for example the Landscape Management Plan shall incorporate measures to maintain and enhance biodiversity, for example by seasonal grass cutting. Areas of new grassland shall be planted with native wild flowers and grasses to provide wildlife corridors.

5.66 Opportunities for introducing wildlife corridors throughout the site linking to adjacent wildlife areas shall be considered.

5.67 The site has accommodated a colony of great crested newts which have been relocated to a site close to the development area. The developer shall be required to produce an annual monitoring and management report for agreement with the Council and English Nature.

5.68 Developers shall consider opportunities for public access to nature areas, where site security is not compromised.