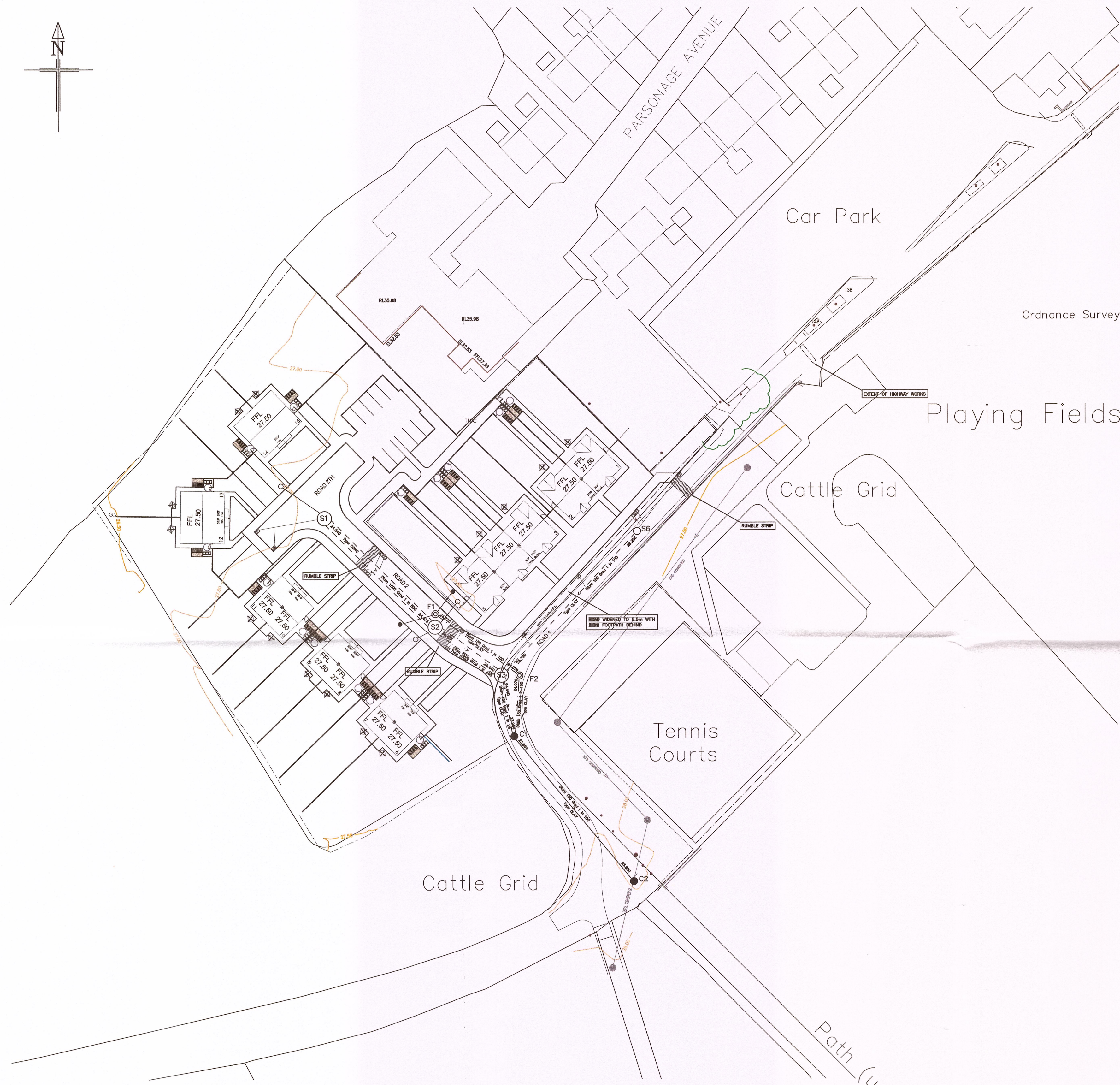




 Existing Public combined sewer to remain
 Proposed adoptable surface water sewer
 Proposed adoptable foul sewer
 Proposed adoptable combined sewer
 Proposed foul lateral
 Proposed surface water lateral
 Proposed gully

All drainage connection points to be located and checked for position and level prior to the commencement of any works.

All levels relate to OS datum and GPS network

Sewers For Adoption Under a Section 104 Agreement

All adoptable sewer works and material to be in accordance with "Sewers for Adoption" 6th Edition, The Relevant British/European and United Utilities Standard/Requirements/Addendum and Kitemarked.

All drainage under carriageway and vehicular areas with less than 1200mm of cover to be protected.
Protection shall be a C20 concrete slab 150mm deep and extend the full width of the trench, with a further minimum of 200mm on either side positioned 250mm above the crown. The slab shall include a layer of A393 mesh and expansion joints at 6m centres.

All drainage under verges with less than 900mm of cover to be protected with 175mm concrete bed & surround.

All 150mm & 225mm dia pipes to be clay to comply with the relevant requirements of BS EN 295-1: 1991.

All pipes 300mm dia and above to be concrete pipes to comply with the relevant provisions of BS 5911. Strength class 120 (minimum strength 54kN/m) unless specified otherwise.

Minimum pipe crushing strength to be 150mm dia. 40KN/m, 225 dia. 45KN/m, 300 dia. 72KN/m.

All pipes to have class 's' granular surround with bedding factor of 2.2 unless stated otherwise on the longitudinal sections and to be class 2 sulphate resistant.

Granular material for surround to be either 10, 14 or 20mm nominal single sized.

Stone backfill is required to all sewer trenches under vehicular areas. As dug material may be used on other areas subject to the written approval of the drainage authority.

Bedding and backfill material to conform to the requirements of
Water Industry Specification 4-08-02 (Table A2)

All concrete products manufactured or cast insitu to be sulphate resistant unless proved otherwise by site investigation or subsequent testing.

Sewers must have 5 metres clearance from trees and hedges, where it is not possible to achieve this clearance concrete bed and surround is required.

The chamber size of manholes with more than one connection may need to be increased an increment to accommodate the connections and bends.

Manhole covers must have a clear opening of 675mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.

Filled ground must be filled and consolidated under the supervision and to the satisfaction of United Utilities before any sewer works are carried out.

Adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins

Any land drain or watercourse on site to be diverted so as not to pass under proposed building. Diversion to be inspected on site by local authority.

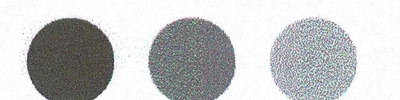
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Preliminary

Engineering Layout

Scale : 1:500

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