

# Provisional Infrastructure Cost Schedule

Annex B



WNDC



## Estimated cost per person and per dwelling of infrastructure requirements

| Facility                                                     | Assumptions and intermediate outputs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Sources and calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Dw'ngs per facility      | Cost per person   | Cost per dwelling (2.4/dw) |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------|----------------------------|
| Primary School including Early Years (and all Special Needs) | <ul style="list-style-type: none"> <li>i Pupils per school = 7 years (including reception) * 30 per form * 2 forms = 420 pupils (a)</li> <li>ii Primary age pupils per dwelling = 1 bed – 0, 2 bed – 0.04, 3 bed – 0.38, 4 bed 0.63, 5+ bed – 0.65 (b)</li> <li>iii Average house size mix for new dwellings = 1 bed – 10%, 2 bed – 28%, 3 bed – 47%, 4 bed 12%, 5+ bed 3% (c)</li> <li>iv Primary age pupils per average dwelling = 0.24 (d)</li> <li>v Cost per two form entry primary school: £6m (a)</li> <li>vi Early years (3 and 4 years) pupils per dwelling = 1 bed – 0, 2 bed – 0.018, 3 bed – 0.081, 4 bed – 0.181, 5+ bed – 0.184 (a)</li> <li>vii Early years pupils per average dwelling = 0.0686 (d)</li> <li>viii Primary school cost per pupil = £14,286 (e)</li> <li>ix Early years cost per dwelling = £3,429 (f)</li> <li>x Early years cost per pupil = Primary age cost per pupil (a)</li> <li>xi Early years cost per dwelling = £980 (g)</li> <li>xii Cost per dwelling of providing for Special Educational Needs (in Primary and Secondary) = £20 (a)</li> </ul> | <ul style="list-style-type: none"> <li>(a) Northamptonshire County Council</li> <li>(b) NCC's Draft Planning Obligation Framework and Guidance (Feb 2008); from Table 6, derived from Pupil Generation Survey for Northamptonshire County Council, BMG Research, Final Report, May 2005</li> <li>(c) DTZ's Strategic Housing Market Assessment for West Northants (June 2007); Figure 8.17 – dwelling requirement by size to accommodate household growth in Western Northants 2006 to 2021</li> <li>(d) Calculated from (iii) and (vi)</li> <li>(e) Calculated from (v) and (i)</li> <li>(f) Calculated from (viii) and (vii)</li> <li>(g) (vii) / (iv) * (ix)</li> </ul> | 1,750                    | £14,286 per pupil | £4429                      |
| Secondary School including Post-16                           | <ul style="list-style-type: none"> <li>i Pupils per school: Aged 11 to 15 = 5 years * 30 per form * 8 forms = 1200 pupils; Post - 16 = 50% of rate for 11 to 15 = 30 * 8 * 50% * 2 = 240 pupils; total 1440 pupils (a)</li> <li>ii 11 to 15 age pupils per dwelling = 1 bed – 0, 2 bed – 0.02, 3 bed – 0.13, 4 bed 0.24, 5+ bed – 0.43 (b)</li> <li>iii Post-16 pupils per dwelling = 1 bed – 0, 2 bed – 0.0078, 3 bed – 0.017, 4 bed 0.023, 5+ bed – 0.089 (b)</li> <li>iv Average house size mix for new dwellings = 1 bed – 10%, 2 bed – 28%, 3 bed – 47%, 4 bed 12%, 5+ bed 3% (c)</li> <li>v Cost per eight form entry secondary school: £35m (a)</li> <li>vi Pupils per average dwelling: 11 to 15 age = 0.11; post-16 pupils = 0.0156; total secondary = 0.126 (d)</li> <li>vii Secondary school cost per pupil = £24,306 (e)</li> <li>viii Secondary school cost per dwelling = £3,429 (f)</li> </ul>                                                                                                                                                                              | <ul style="list-style-type: none"> <li>Assessment for West Northants (June 2007); Figure 8.17 – dwelling requirement by size to accommodate household growth in Western Northants 2006 to 2021</li> <li>(d) Calculated from (iii), (iv) and (v)</li> <li>(e) Calculated from (vii) and (i)</li> <li>(f) Calculated from (viii) and (vi)</li> </ul>                                                                                                                                                                                                                                                                                                                         | 40                       | 40                |                            |
| Libraries                                                    | <ul style="list-style-type: none"> <li>i 30 m2 of library space per 1000 people (a)</li> <li>ii construction cost of £3,000 per m2 for library buildings (in South East) (a)</li> <li>iii 98% adjustment for Northamptonshire (a)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | (a) NCC's Draft Planning Obligation Framework and Guidance (Feb 2008); based on the South East Public Library Tariff prepared Museums Libraries Archives (MLA) South East (January 2007 revised edition)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          | £88 per person    | £221                       |
| Archives                                                     | <ul style="list-style-type: none"> <li>i 5 m2 per 1000 people (a)</li> <li>ii Construction cost per m2 for archive buildings: £3,600 (a)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (a) Development of a Tariff for Archive Provision in the South East Region (March 2007) – Museums Libraries Archives (MLA) South East                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          | £18 per person    | £43                        |
| Community facilities                                         | <ul style="list-style-type: none"> <li>i 61 m2 of community centre floorspace per 1000 people (a)</li> <li>ii Construction cost per m2= £3,000 (b)</li> <li>iii 530 m2 per centre (b)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>(a) SPG on Planning Obligations for Leisure, Recreation and Sport Facilities (2004) Milton Keynes Borough Council</li> <li>(b) Examples from Milton Keynes Partnership Business Plan (June 2007)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                         | 3620                     | £183 per person   | £439                       |
| Play space                                                   | <ul style="list-style-type: none"> <li>i ha of per 1000 people: Locally Equipped Area for Play (LEAP) 0.12 ha; Neighbourhood Equipped Area for Play (NEAP) 0.12 ha (a)</li> <li>ii Construction cost: per LEAP = £54,459; per NEAP = £179,272 (b)</li> <li>iii Thirty year maintenance cost: per LEAP = £160,365; per NEAP = £382,137 (b)</li> <li>iv Area per play area: LEAP = 0.16 ha; NEAP = 0.308 ha (b)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>(a) Open Space, Sport and Recreation Needs Assessment and Audit (2006), Northampton Borough Council</li> <li>(b) Developer Contributions for Residential Developments (Nov 2007), Swindon Borough Council</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                | LEAP: 556;<br>NEAP: 1069 | £379 per person   | £911                       |

| Facility             | Assumptions and intermediate outputs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sources and calculations                                                                                                                                                                                                                                                                                                                             | Dw'ngs per facility       | Cost per person | Cost per dwelling (2.4/dw) |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------|----------------------------|
| Playing pitches      | <ul style="list-style-type: none"> <li>i 1.88 ha of outdoor playing fields per 1000 pop (a)</li> <li>ii Construction cost for a 7 ha facility: £418,000 (b)</li> <li>iii Thirty year maintenance cost for a 7 ha facility: = £756,000 (b)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>(a) Open Space, Sport and Recreation Needs Assessment and Audit (2006), Northampton Borough Council</li> <li>(b) Developer Contributions for Residential Developments (Nov 2007), Swindon Borough Council</li> </ul>                                                                                          | 7 ha facility: 1551       | £315 per person | £757                       |
| District park        | <ul style="list-style-type: none"> <li>i 0.8 ha of park and gardens per 1000 pop (a)</li> <li>ii Construction cost for a 1.3 ha facility: £220,000 (b)</li> <li>iii Thirty year maintenance cost for a 1.3 ha facility: = £170,100 (b)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>(a) SPG on Planning Obligations for Leisure, Recreation and Sport Facilities (2004) Milton Keynes Borough Council (l).</li> <li>(b) Developer Contributions for Residential Developments (Nov 2007), Swindon Borough Council - excluding costs of strategic play features and other play provision</li> </ul> | 1.3 ha facility: 682      | £238 per person | £571                       |
| Green infrastructure | Direct assumption (a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (a) Per dwelling cost – WNDC discussions with stakeholders and developers on current major schemes                                                                                                                                                                                                                                                   |                           |                 | £250                       |
| Public realm         | Direct assumption (a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (a) Per dwelling cost – WNDC discussions with stakeholders and developers on current major schemes                                                                                                                                                                                                                                                   |                           |                 | £480                       |
| Cultural investment  | Direct assumption (a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | (a) Per dwelling cost – WNDC discussions with stakeholders and developers on current major schemes                                                                                                                                                                                                                                                   |                           |                 | £360                       |
| Burial grounds       | <ul style="list-style-type: none"> <li>i Annual death rate 9.9 per 1000 (a)</li> <li>ii Burials account for 30% of deaths (a)</li> <li>iii 1730 grave plots per ha (a)</li> <li>iv 2.5 burials per grave (a)</li> <li>v ha per 1000 pop in 20 yrs = 0.01373 (b)</li> <li>vi Cost of cemetery provision = £378,000 per ha, excluding land costs (a)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>(a) The Cost &amp; Funding Of Growth in South East England” Roger Tym &amp; Partners for South East Counties (June 2005)</li> <li>(b) Calculated from (i) to (v)</li> </ul>                                                                                                                                   |                           | £5              | £12                        |
| Sports hall          | <ul style="list-style-type: none"> <li>i 0.29 badminton court per 1000 people (a)</li> <li>ii Construction cost per 4 court sports hall = £2.475m (a)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (a) Open Space, Sport and Recreation Needs Assessment and Audit (2006), Northampton Borough Council, based on Sport England Toolkit                                                                                                                                                                                                                  | 4 court sports hall: 5747 | £180 per person | £431                       |
| Swimming pool        | <ul style="list-style-type: none"> <li>i 10.5m2 water space per 1000 people (a)</li> <li>ii 265m2 per 5 lane 25m pool (a)</li> <li>iii Construction cost per 5 lane pool = £2.42m (a)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (a) Open Space, Sport and Recreation Needs Assessment and Audit (2006), Northampton Borough Council, based on Sport England Toolkit                                                                                                                                                                                                                  | 5 lane pool: 10,516       | £96 per person  | £230                       |
| Police stations      | <p><b>General office accommodation</b></p> <ul style="list-style-type: none"> <li>• Number of households per Police officer plus police staff remains constant, at 107.52</li> <li>• Non-specialist accommodation per member of staff = 13.4 m2</li> <li>• Cost of non-specialist accommodation = £2,679 per m2</li> </ul> <p><b>Custody facilities</b></p> <ul style="list-style-type: none"> <li>• Number of households per m2 of custody facilities remains constant at 115.12 m2</li> <li>• Cost of non-specialist accommodation = £3,505 per m2</li> </ul> <p><b>Miscellaneous capital costs per police officer</b></p> <ul style="list-style-type: none"> <li>• Ratio of Police officers to total police staff = 0.53</li> <li>• One-off start up costs per police officer = £10,953</li> </ul> <p><b>Miscellaneous capital costs per police support staff member</b></p> <ul style="list-style-type: none"> <li>• Ratio of Police officers to total police staff = 0.47</li> <li>• One-off start up costs per police officer = £3,174</li> </ul> | (a) Northamptonshire Police Draft “Policing Contributions from Development Schemes” (undated)                                                                                                                                                                                                                                                        |                           |                 | £432                       |
| Fire stations        | <ul style="list-style-type: none"> <li>i 1 new fire station with fire appliance and equipment per 12,476 dwellings (a)</li> <li>ii Construction cost of new fire station: £2m (a)</li> <li>iii Cost of new fire appliance and equipment: £200,000 (a)</li> <li>iv Percentage of fires in residential buildings: 49% (a)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | (a) NCC's Draft Planning Obligation Framework and Guidance (Feb 2008)                                                                                                                                                                                                                                                                                | 12,476                    | £36 per person  | £86                        |

| Facility                 | Assumptions and intermediate outputs                                                                                                                                                                                                                                                                                      | Sources and calculations                                                                                                                                                                                                                                                                                                                                                                                 | Dw'ngs per facility | Cost per person | Cost per dwelling (2.4/dw) |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------|----------------------------|
| GP health centre (5GP)   | <ul style="list-style-type: none"> <li>i 1800 patients per GP (a)</li> <li>ii 168.75m<sup>2</sup> per GP , giving 844 m<sup>2</sup> per 5GP health centre (b)</li> <li>iii Construction cost per m<sup>2</sup> of health centre: £2,250 (c)</li> <li>iv Construction cost of new 5 GP health centre: £1.9m (d)</li> </ul> | <ul style="list-style-type: none"> <li>(a) Government target for average number of patients per GP (implicit in GP contracts)</li> <li>(b) Technical Report on Infrastructure Requirements in the South East 2006-2026" SQW for SEERA (Sept 2006) – advice from Dept of Health (b)</li> <li>(c) Recent cases (2007) in Notts and Staffs – average</li> <li>(d) Calculated from (ii) and (iii)</li> </ul> | 3,750               | £211 per person | £506                       |
| Waste disposal           | <ul style="list-style-type: none"> <li>i Cost of municipal waste disposal including compliance with LATS directive over five years 2008/9 to 2012/3 = £409 per household</li> </ul>                                                                                                                                       | <ul style="list-style-type: none"> <li>(a) NCC's Draft Planning Obligation Framework and Guidance (Feb 2008), based on annual estimates of municipal waste generation</li> </ul>                                                                                                                                                                                                                         |                     | £170 per person | £480                       |
| Transport                | <ul style="list-style-type: none"> <li>i Costed items associated with Northampton, Daventry, and Towcester, and proposed mainly for funding by developers, County Council or regionally (a) (b)</li> </ul>                                                                                                                | <ul style="list-style-type: none"> <li>(a) "Transport Strategy for Growth", Northamptonshire County Council (Sept 2007)</li> <li>(b) See Table ***</li> </ul>                                                                                                                                                                                                                                            |                     |                 | £10,852                    |
| Training                 | <ul style="list-style-type: none"> <li>Direct assumption (a)</li> </ul>                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>(a) Per dwelling cost – WNDC discussions with stakeholders and developers on current major schemes</li> </ul>                                                                                                                                                                                                                                                     |                     |                 | £97                        |
| Voluntary sector support | <ul style="list-style-type: none"> <li>Direct assumption (a)</li> </ul>                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>(a) Per dwelling cost – WNDC discussions with stakeholders and developers on current major schemes</li> </ul>                                                                                                                                                                                                                                                     |                     |                 | £260                       |

## Notes:

- (1) This standard is used in preference to the quantitative standard for parks and gardens in Northampton Borough Council's Open Space, Sport and Recreation Needs Assessment and Audit (2006) of 1.64 ha per 1000 pop, as the latter is significantly higher than standards adopted elsewhere; e.g. RTP study "The Cost & Funding of Growth in South East England", Roger Tym & Partners for South East Counties (June 2005), uses 0.6 ha per 1000 pop.



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