Welborne New Community

Infrastructure Delivery Plan 2014

Stage 2 Update Report

January 2014

AECOM

Client: Fareham Borough Council

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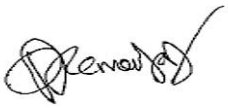
Approved by: 
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Rev No	Comments	Checked by	Approved by	Date
1	Draft Stage 2 Update Report	MP	PC	19/12/2013
2	Stage 2 Update Report Post FBC Comments	MP	PC	13/01/2014
3	Client amendments to Transport section	MP	PC	30/01/2014

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Contents

1. Introduction

The Stage 1 Infrastructure Delivery Plan

1.1. The earlier Stage 1 report was issued in February 2013 and presented the first iteration of the Infrastructure Delivery Plan (IDP) required to support the Local Plan Part 3: New Community North of Fareham Draft Plan (April 2013). The Stage 1 IDP provided an in depth baseline analysis of infrastructure provision in and around the Welborne site and documented the iterative steps towards a draft infrastructure project schedule.

1.2. The Stage 1 IDP included the following details:

- Our understanding of the multiple Masterplan options for the New Community
- Our understanding of housing and employment growth options and the potential variables within these options.
- A review of existing population projections and demographic modelling carried out for the study area
- A review of existing studies and data of relevance to infrastructure provision in the area north of Fareham town but also across the wider Fareham borough, adjoining local authority areas and Hampshire County.
- Our development of an infrastructure capacity baseline (an understanding of the existing infrastructure capacity across the study area built up from existing sources and including information on existing location of infrastructure, type of provision, size and capacity of facilities and any surplus capacity if that was appropriate).
- A review of infrastructure proposals suggested through FBC commissioned studies (such as the leisure and recreation implementation strategy, transport modelling and the eco-opportunities study), key stakeholder strategies (such as the County Council Strategic Infrastructure Statement) and through meetings with service providers.
- An indication of the potential infrastructure requirements associated with all masterplan options, through analysis of the upper, lower and mid points in the range of development quanta included in the 4 masterplan options.
- A revised list of potential infrastructure projects covering all infrastructure topics including potential costs (limited to indicative costings at this stage prior to stage 2 details) and likely timing of delivery.
- An introduction to project prioritisation which will be developed further in stage 2 of the project. This stage 1 report introduces the need to prioritise the infrastructure projects and sets out an approach for consideration by FBC.
- An estimation of future CIL income from the NCNF based on current assumed CIL rates and average housing unit sizes.
- A high level review of potential additional sources of funding outside the limited income generated by application of the Community Infrastructure Levy (CIL) on the housing and employment floorspace proposals.

1.3. The Stage 1 IDP can be viewed on the Fareham Borough Council website under the Welborne Plan evidence base:
http://www.fareham.gov.uk/planning/new_community/evidencestudies.aspx

Stage 2 of the Review of the Infrastructure Delivery Plan

1.4. This stage 2 update report represents the outputs of Stage 2 of the Infrastructure Delivery Plan (IDP) to support the Welborne Plan for Fareham Borough Council. The report is intended to provide a succinct update on the earlier in-depth stage 1 report.

1.5. Key activities that have taken place since production of the Stage 1 IDP include the following:

- Re-assessment of the potential social and green infrastructure requirements generated from the scheme as different housing numbers and trajectories have been considered.
- Detailed analysis of potential child yield generated from the scheme and associated education requirements and negotiations with Hampshire County Council over requirements.
- Continued liaison with the utility service providers and re-assessment of quantity and cost of utility infrastructure required to serve onsite development and link to external services.
- Continued liaison with Hampshire County Council and Parsons Brinckerhoff (FBC commissioned transport consultants) and re-assessment of quantity and cost of transport projects required to serve onsite development, adequate connections to the existing transport network and mitigation of off-site transport impacts from the development.
- Continued liaison with LDA Design over Masterplan preferred option and infrastructure sizing and siting.
- Project rationalisation and prioritisation process established and applied to the infrastructure project list in consultation sessions with FBC officers, Hampshire County Council and key stakeholders.

1.6. The details of these Stage 2 activities and the resulting implications are documented in the following chapters:

- Stage 2 Strategic Framework Update
- Stage 2 Development Trajectory and Demographics
- Social and Green Infrastructure Analysis Update
- Overview of Stage 2 Project List Updates
- Stage 2 Full IDP Project List

2. Stage 2 Strategic Framework Update

Introduction

2.1. Within this section we present the latest Strategic Framework Diagram which has been developed to support the Local Plan Part 3: Welborne Plan Publication Draft, and also the more detailed Concept Masterplan which provides background evidence as an expression of how masterplanning could be worked up in more detail in accordance with the Strategic Framework.

2.2. LDA Design has refined the three Masterplan options described in the Stage 1 IDP towards a single option which is considered by this IDP update. Figure 2.1 presents the Concept Masterplan Option 2c which includes the third M27 Junction 10 option (WSP option with new offslip). Figure 2.2 presents the Strategic Framework Diagram which includes the same key project components with less detail.

2.3. The land budget associated with the Concept Masterplan is presented in tables 2.1 to 2.3 below.

Table 2.1: On Site Land Use Budget	
	Land (ha)
Residential	172.9
Employment	22.6
Community Centres	6.6
Primary School	8.1
Secondary School (excluding playing field)	2.8
Onsite Green Infrastructure	107.2
Roads	18.7
Unutilised land	45.7
total	**384.5**

Table 2.2: On Site Green Infrastructure Land Use Budget	
	Land (ha)
Parks and Amenity Open Space	22.8
Outdoor Sports (excluding 7.15ha Secondary school Playing Fields)	10.7
Allotments	2.1
Semi Natural Green Space	63.2
Incidental Green Space	8.7
total	**107.5**

Table 2.3: Off Site Land Use Budget	
	Land (ha)
SANGS (made up of the following:)	70.6
/ Knowle Triangle (Moyse Land)	14.9
/ Dash Wood (BDL Land)	38.1
/ Fareham Common (BDL Land)	13.9
/ Fareham Common (Other 3rd Party Land)	3.6
Secondary School Playing Field on Knowle Triangle	7.2
total	**77.7**

2.4. The process of moving from the three options presented in the Stage 1 IDP to the current option has resulted in a number of previous variables or options being decided upon and those key decisions have been taken into account in the Stage 2 update to the IDP.

2.5. Some of the key changes should be noted here as they have direct impacts on the IDP and its infrastructure project list. It should be caveated that these are not being presented as the final plan position but instead represent the latest position for assessment as part of the Stage 2 IDP:

- Total residential units have been confirmed as **6,000 units in total**. This is below the medium level of growth assessed within the Stage 1 IDP.
- Housing Trajectory has reduced from 25 years to 20 years and runs between 2016 and 2036.
- Employment: 20 hectares of land for employment development
- Affordable housing: The Local Plan Part 3: Welborne Plan Publication Draft sets a specific target for 30% affordable housing and acknowledges that this this is likely to be the highest level achievable overall, although some phases may have higher levels
- Housing Density: Latest position on 6,000 units is approximately 33.5 DPH.

2.6. This update report will focus on the key infrastructure proposal changes that have also occurred between the finalisation of the Stage 1 IDP and now. These are set out in detail in Chapter 5.

2.7. Further detail on the broader changes to the Strategic Framework Diagram will be documented in the Local Plan Part 3: Welborne Plan Publication Draft.

Figure 2.1: Concept Masterplan Assessed for Stage 2 IDP

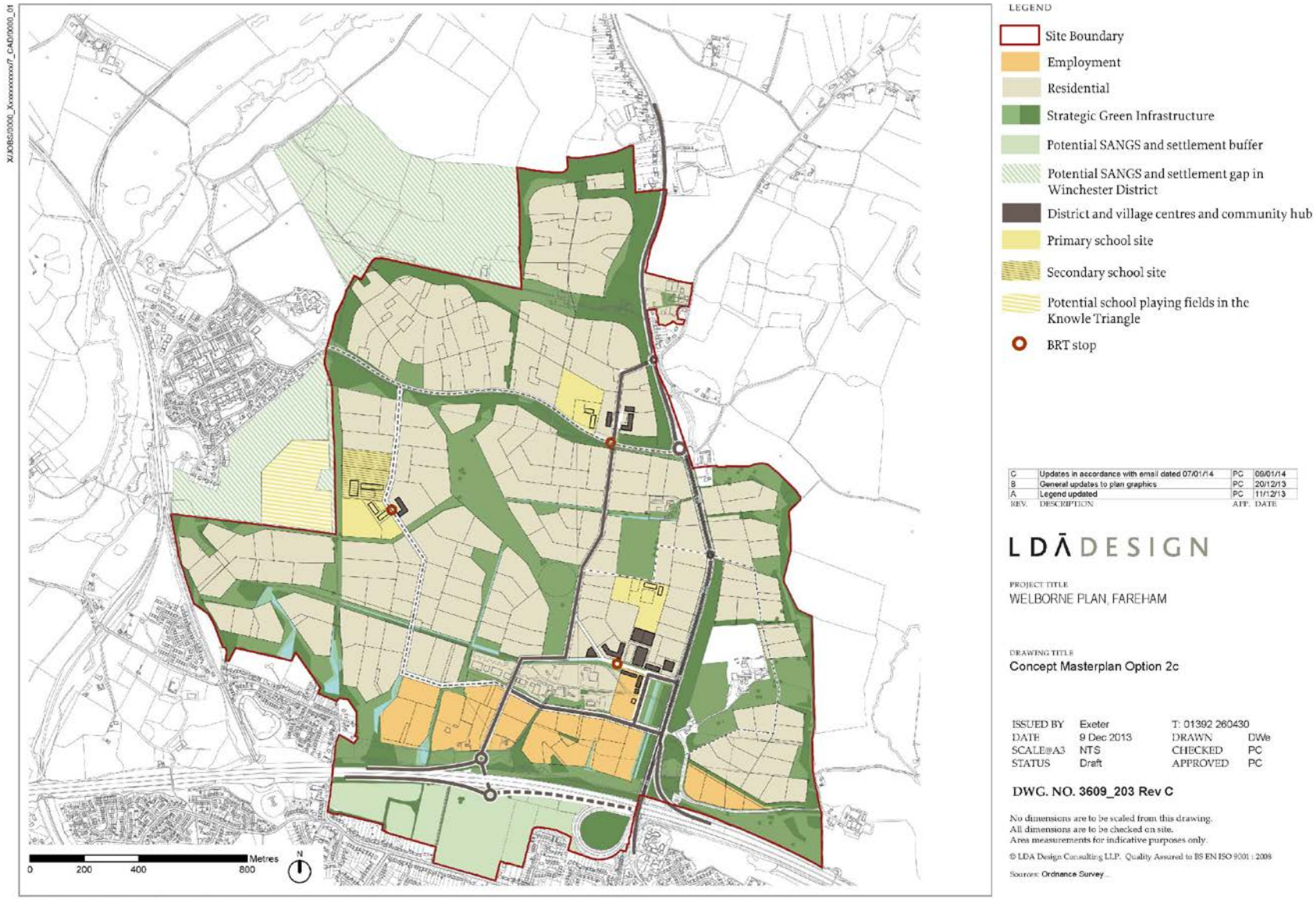
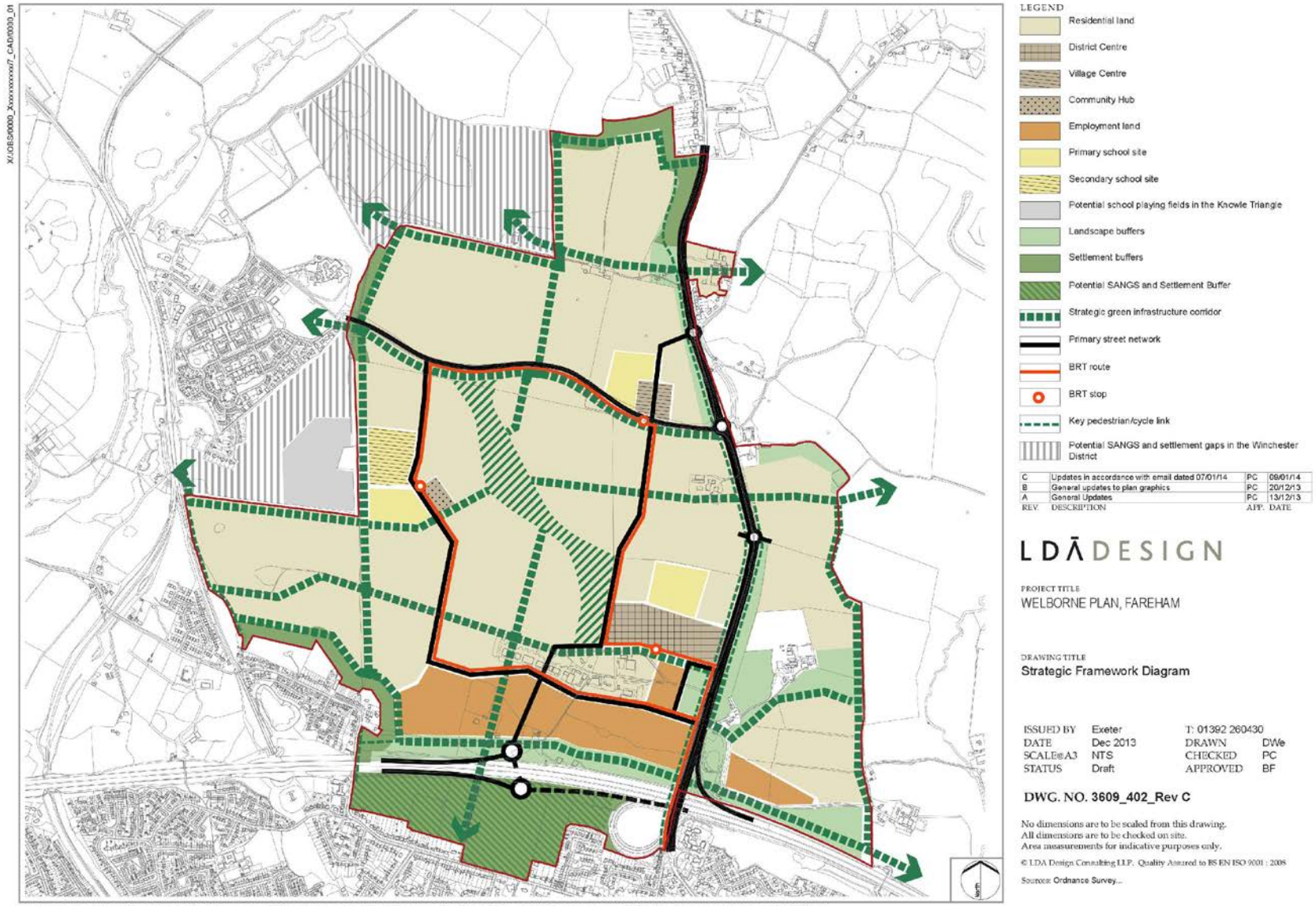


Figure 2.2: Strategic Framework Plan Assessed for Stage 2 IDP



3. Stage 2 Development Trajectory and Demographics

3.1. In order for AECOM to continue to understand the infrastructure requirements required to support the New Community we must continue to review the potential demographic impacts of the scheme and how the population will grow and change over the build out phase and into the future.

3.2. Since the Stage 1 IDP the number of housing units proposed on the Welborne site has been reduced to 6,000 and the number of years expected to deliver these homes has accordingly been reduced from 25 years to 20 years spanning from 2016 to 2036. Table 3.1 below sets out the housing trajectory in its simplest form.

Table 3.1: Final Stage 2 housing Trajectory informing the IDP

	Annual Completions	Cumulative Completions
2016/17	120	120
2017/18	180	300
2018/19	200	500
2019/20	320	820
2020/21	340	1,160
2021/22	340	1,500
2022/23	340	1,840
2023/24	340	2,180
2024/25	340	2,520
2025/26	340	2,860
2026/27	340	3,200
2027/28	340	3,540
2028/29	340	3,880
2029/30	340	4,220
2030/31	340	4,560
2031/32	340	4,900
2032/33	280	5,180
2033/34	280	5,460
2034/35	280	5,740
2035/36	260	6,000

3.3. The Stage 1 IDP set out in detail the approach towards demographic forecasting being employed by this study. The Chelmer Model established in the earlier study has again been used utilising the latest housing trajectory. The detailed population forecasts generated by the Chelmer model have been fed into revised social and green infrastructure analysis and have informed the updated review of utility and transport requirements. Table 3.2 on the following page presents a summary of that detailed forecast by key age cohorts.

Table 3.2: Summary of population by key cohorts									
		2016	2020	2025	2030	2035	2040	2045	2050
Cumulative Units		120	1,160	2,860	4,560	6,000	6,000	6,000	6,000
Cumulative Population		324	3,124	7,477	11,695	15,135	14,495	13,882	13,276
Key Age Cohorts	Early Year (0-3)	24	242	524	719	827	632	509	454
	Primary Aged (4-10)	28	306	821	1,282	1,517	1,342	1,090	906
	Secondary Aged (11- 15)	10	150	420	765	1,044	1,063	957	808
	Sixth Form (16-17)	4	48	136	252	378	418	403	360
	18 - 19 Year olds	8	52	122	222	344	373	381	346
	Ages 20-64	240	2,145	4,891	7,442	9,543	8,777	8,218	7,602
	Ages 65-74	10	103	305	550	830	1,043	1,236	1,445
	75 years +	0	78	258	463	652	847	1,088	1,355

3.4. For reference, Table 3.3 below also set out the results of the latest population projections for Welborne projection by each age cohort.

Table 3.3: Chelmer Model Population Projection - Age Cohort specific Projections							
	2020	2025	2030	2035	2040	2045	2050
0 - 3	242	524	719	827	632	509	454
4 - 10	306	821	1,282	1,517	1,342	1,090	906
11 - 15	150	420	765	1,044	1,063	957	808
16 - 17	48	136	252	378	418	403	360
18 - 19	52	122	222	344	373	381	346
20 - 24	262	436	586	770	592	608	580
25 - 29	380	664	828	926	579	490	482
30 - 34	426	857	1,114	1,248	840	636	574
35 - 39	360	886	1,272	1,499	1,192	890	734
40 - 44	241	692	1,159	1,474	1,378	1,123	877
45 - 49	146	448	871	1,259	1,334	1,243	1,030
50 - 54	148	362	657	992	1,188	1,243	1,161
55 - 59	108	317	530	759	943	1,101	1,145
60 - 64	74	229	425	616	731	884	1,019
65 - 69	56	175	315	477	587	686	814
70 - 74	47	130	235	353	456	550	631
75 +	78	258	463	652	847	1,088	1,355
Total Population	**3,124**	**7,477**	**11,695**	**15,135**	**14,495**	**13,882**	**13,276**

4. Social and Green Infrastructure Analysis Update

4.1. This chapter presents the latest assessment of anticipated levels of demand for social and green infrastructure, taken at 5 year phase snapshots. These have been generated from the AECOM social infrastructure framework (SIF) modelling process using the demographic forecasts set out in the previous chapter and the set of standards agreed in the Stage 1 IDP. The peak level of demand is highlighted through yellow shading.

Education

4.2. Table 4.1 below presents the latest assessment of anticipated levels of demand for education services, taken at 5 year phase snapshots.

Table 4.1: Assessed Education Requirements associated with 6000 units								
	2016	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Nursery Places	11	107	247	346	390	311	246	217
50 Place Nursery	0.2	2.1	4.9	6.9	7.8	6.2	4.9	4.3
Primary School Aged Pupils	28	306	821	1,282	1,517	1,342	1,090	906
Primary School Places	27	291	780	1,218	1,441	1,275	1,036	861
Primary School FE	0.1	1.4	3.7	5.8	6.9	6.1	4.9	4.1
Secondary School Aged Pupils	10	150	420	765	1,044	1,063	957	808
Secondary School Places	9	131	365	666	908	925	833	703
Secondary School FE	0.1	0.9	2.4	4.4	6.1	6.2	5.6	4.7

Community and Cultural Facilities

4.3. Table 4.2 below presents the latest assessment of anticipated levels of demand for community facilities, taken at 5 year phase snapshots.

Table 4.2: Assessed Community Facility Requirements associated with 6000 units								
	2016	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Library Space (m²)	5	47	112	175	227	217	208	199
Community Halls (m²)	14	134	322	503	651	624	597	571
Archive Space (m²)	2	19	45	70	91	87	83	80
Multi-Use Arts (m²)	15	141	336	526	681	652	625	597
Museum Space (m²)	9	87	209	327	424	406	389	372

Health and Social Care

4.4. Table 4.3 below presents the latest assessment of anticipated levels of demand for health and social care services, taken at 5 year phase snapshots.

Table 4.3: Assessed Health and Social Care Facility Requirements associated with 6000 units								
	2016	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
GPs	0	2	4	6	8	8	8	7
GPs Surgery Space (m²)	33	316	756	1,182	1,530	1,466	1,404	1,342
Dentists	0	2	6	9	11	11	10	10
Dentist Space (m²)	12	116	277	433	561	537	514	492
Pharmacies	0	1	1	2	2	2	2	2
Opticians	0	0	1	2	2	2	2	2
Extra Care Housing (Units)	0	2	6	12	16	21	27	34

Emergency Services

4.5. Table 4.4 below presents the latest assessment of anticipated levels of demand for emergency service provision, taken at 5 year phase snapshots.

Table 4.4: Assessed Emergency Service Requirements associated with 6000 units								
	2016	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Police Officers	0	1	4	6	7	7	7	6
PCSOs	0	1	3	5	7	7	6	6
Fire Stations	0.0	0.2	0.4	0.6	0.7	0.7	0.7	0.6
Ambulances	0	1	2	3	4	4	4	4

Leisure and Recreation

4.6. Table 4.5 below presents the latest assessment of anticipated levels of demand for leisure and recreation facilities, taken at 5 year phase snapshots.

Table 4.5: Assessed Leisure and Recreation Facility Requirements associated with 6000 units								
	2016	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Sports Halls (m²)	17	161	384	601	778	745	714	683
Swimming Pools (m²)	11	104	250	390	505	484	464	443
Bowling Green Court	0.0	0.4	0.9	1.4	1.8	1.7	1.6	1.6
Indoor Bowls Court	0.03	0.27	0.64	1.01	1.31	1.25	1.20	1.14
Gym Space (m²)	5	50	120	187	242	232	222	212
Tennis Courts	0.1	0.9	2.2	3.5	4.5	4.3	4.2	4.0
Synthetic Turf Pitches (Ha)	0.0	0.1	0.1	0.2	0.3	0.3	0.2	0.2
Athletics Track (6 Lane)	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1

Green Infrastructure

4.7. Table 4.6 below presents the latest assessment of anticipated levels of demand for green infrastructure, taken at 5 year phase snapshots.

Table 4.6: Assessed Green Infrastructure Requirements associated with 6000 units								
	2016	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Parks and amenity open space	0.5	4.7	11.2	17.5	22.7	21.7	20.8	19.9
Playing pitches (Outdoor Sports)	0.4	3.7	9.0	14.0	18.2	17.4	16.7	15.9
Allotments	0.0	0.4	1.0	1.6	2.1	2.0	1.9	1.8
Local Nature Reserve	0.3	3.1	7.5	11.7	15.1	14.5	13.9	13.3
Natural Greenspace	0.6	6.2	15.0	23.4	30.3	29.0	27.8	26.6
Total On Site GI	1.9	18.2	43.6	68.3	88.3	84.6	81.0	77.5
Total Off Site SANGs	1.8	17.5	41.9	65.5	84.8	81.2	77.7	74.3

Children's Play Space

4.8. Table 4.7 below presents the latest assessment of anticipated levels of demand for children's play space and equipment, taken at 5 year phase snapshots.

Table 4.7: Assessed Children's Play Space Requirements associated with 6000 units								
	2016	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Play space Equipment	1	9	22	34	42	37	30	26
MUGA / Youth Facility	1	1	1	1	1	1	1	1
Local Play (ha)	0.01	0.09	0.22	0.33	0.39	0.33	0.27	0.23
Neighbourhood Play (ha)	0.01	0.09	0.22	0.33	0.39	0.33	0.27	0.23
Youth Play (ha)	0.00	0.04	0.10	0.19	0.26	0.26	0.24	0.20

Child Yield Impact Sensitivity Analysis

4.9. Stage 2 of the IDP has included further analysis of the potential child yield generated from Welborne as a sensitivity test to inform discussions with Hampshire County Council to ensure appropriate education proposals are provided to mitigate the development.

4.10. As explained earlier the child yield forecast for Welborne has been taken directly from the Chelmer model which provides annual population figures by single years of age. Taking the forecasts from this model a simplified child yield figure can be expressed as set out in table 4.8 below.

Table 4.8: Chelmer Model Child Yields evolving over the Housing Trajectory.

	2016	2020	2025	2030	2035	2040	2045	2050
Units Delivered	120	1,160	2,860	4,560	6,000	6,000	6,000	6,000
Primary aged child yield Per dwelling (4-10 years)	0.23	0.26	0.29	0.28	0.25	0.22	0.18	0.15
Secondary aged child yield Per dwelling (11-15 years)	0.08	0.13	0.15	0.17	0.17	0.18	0.16	0.13

4.11. As can be seen the child yield generated from the developed residential units is seen to change over the 20 year build out period and then after this point as the development matures with its existing residents. However the child yield at the point at which the full development is delivered is seen to be **0.25 primary school** children per dwelling and **0.17 secondary school** children per dwelling.

4.12. Hampshire County Council had previously provided feedback on the Local Plan Part 3: The Draft Welborne Plan April 2013. This feedback indicated concerns that the Chelmer model child yields for Welborne were below those expected by the County Council based on the application of County Council research into local child yield figures from new developments. Table 4.9 below presents the assumed primary and secondary child yields adopted by Hampshire county council but also a number of comparable county councils.

Table 4.9: Comparable Child Yield Assumptions from neighbouring County Councils

	Primary aged Child Yield per dwelling	Secondary aged Child Yield per dwelling
Hampshire County Council	**0.30**	**0.21**
Lincolnshire County Council	0.18	0.20
Surrey County Council	0.30	0.19
Oxfordshire County Council	0.22	0.15
East Sussex County Council	0.25	0.11
West Sussex County Council	0.25	0.18
Gloucester County Council	0.25	0.18
Somerset County Council	0.20	0.14
Worcestershire County Council	0.21	0.15

4.13. AECOM have undertaken an extensive review of child yields in Fareham and the wider sub region and have concluded that the child yield assumptions used by Hampshire County Council are higher than all comparable county councils. The database supporting the Hampshire County Council child yield figures was also shared with AECOM and analysed.

4.14. The HCC figure of 0.3 primary aged children per dwelling is taken from an average of the child yields from a wide range of developments in Hampshire. This full database includes developments as small as 9 units and as large as more than 1,000 units and includes a number of child yield figures which would be considered statistical outliers. The child yields used by Hampshire County Council are a simple average of all these yields. If the same dataset is analysed and the median child yield taken rather than average (to remove the outliers) the child yield is 0.28 primary aged children per dwelling. If the small developments are also removed from data base to enable a more equal comparison with Welborne the median child yield is then seen to be 0.25 primary aged children per dwelling.

4.15. Based upon this child yield review and wider evidence shared with the Fareham Borough Council, AECOM have recommended that the child yield from the Chelmer model form the basis of education infrastructure requirements in the IDP.

5. Overview of Stage 2 Project List Updates

Project Prioritisation

5.1. An important part of the stage 2 IDP has been to carry out a prioritisation review of all Infrastructure projects identified for the Welborne scheme. This requirement and approach was introduced in the stage 1 IDP. As the Welborne Plan and the associated funding strategy are developed further, the importance of prioritising key infrastructure investments will become increasingly apparent.

5.2. Each project has been assessed against the criteria set out in Table 5.1 below. This was undertaken initially by AECOM and then tested against a number of wider stakeholder audiences including FBC officers, Hampshire County Council and the consultants supporting the masterplanning and wider Local Plan work streams. The resulting prioritisation is included as a column within the IDP list in the following chapter.

Table 5.1: Infrastructure Prioritisation Categories	
Critical Infrastructure	This defines infrastructure that must happen to enable growth, i.e. they are the first element require to unlock any future works and without them development cannot proceed. These infrastructure items are known as 'blockers' or 'showstoppers', they are most common in relation to transport and utilities infrastructure and are usually linked to triggers controlling the commencement of development activity. It also includes Essential Services that are required to facilitate growth or be delivered in advance of residential / commercial development, i.e. connection to the potable water and wastewater network.
Essential Infrastructure	This defines infrastructure that is essential and considered necessary in order to mitigate impact arising from the operation of the development. These are projects which are usually identified as required mitigation in EIA/SEA/TIA testing. These projects are necessary to make the proposed development acceptable in planning terms and are directly related to the proposed development. These items are most common in relation to trip and population generated by the development (including school places, health requirements and public transport (service) projects), and are usually linked to triggers controlling the occupation of development sites. This will largely be secondary infrastructure that is profiled subsequent to Critical Infrastructure.
Policy High Priority Infrastructure	This defines infrastructure that is required to support wider strategic or site specific objectives which are set out in planning policy or is subject to a statutory duty, but would not necessarily prevent development from occurring. This type of infrastructure has a less direct relationship of addition population creating additional need, and is more influenced by whether a person chooses to use this facility or service (including use of community facilities and libraries and use of sports facilities), and are usually linked to triggers controlling the completion of development sites.
Desirable Infrastructure	This defines infrastructure that is required for sustainable growth but is unlikely to prevent development in the short to medium term. This is often aligned to placemaking objectives and is infrastructure that does not require previous enabling.

5.3. It is important to recognise that this process of categorisation is the first step in supporting discussions of infrastructure prioritisation that are undertaken in the context of current day assessments. It may be appropriate that projects considered 'Policy High Priority' or 'Desirable' in isolation or at current day are reclassified as essential mitigation when their impact in terms of viability and/or enhancing the attractiveness of Welborne is considered in accordance with other priorities.

Project Triggers and development trajectory.

5.4. Building on the prioritisation review, the timing of infrastructure provision has also been refined further as part of the stage 2 IDP. For all items in the IDP project list an estimated year at which that item is required on site has been identified. The phasing of infrastructure is particularly important as it represents the primary evidence base for anticipating cash flow from infrastructure spending as part of the wider financial modelling of the development.

5.5. The identification of dependencies and parallels that exist between infrastructure projects allows for an appreciation of appropriate delivery timescales. Dependencies are normally aligned to a 'lag' before the project is available, representing the construction or delivery period of the infrastructure. For the most part all infrastructure will be assigned a primary trigger aligned to the development trajectory and the anticipated build-out programme to deliver the project from start on site to available for occupation.

5.6. In the case of some infrastructure projects there is no specific delivery date as the infrastructure item relates to the provision of services that will be gradually provided on site as and when additional units are delivered. In these cases the proportional cost of the infrastructure is phased in line with the delivery of residential units.

5.7. In addition to identifying the required delivery date of each infrastructure component, AECOM has also profiled the associated build out period and likely spending requirements for each infrastructure item. This phasing of delivery has been provided to Gardiner and Theobald for consideration as part of the comprehensive development costing.

Social Infrastructure Project Updates

5.8. With regards to education facilities the following key facilities are confirmed as required on site as part of the stage 2 IDP:

- Seven Nurseries on site providing a total of 350 nursery places.
- 3 Primary schools on site providing a total of 7 form entries of provision
- One Secondary School on site providing a total of 7 form entries of provision

5.9. A notable update with regard to the education facilities since the Stage 1 IDP is the current proposed location of provision. The siting of the schools can be seen in figures 2.1 and 2.2 and clearly show no education provision to the east of the A32, having been ruled out as unacceptable. The three primary schools and the secondary school are sited adjacent to the District Centre, Local Centre (north of Knowle Road) and the Community Hub in the west of the site.

5.10. The secondary school playing fields are now located outside the site boundary to the west of the secondary school on adjacent land at Knowle Triangle. This land is within the boundary of Winchester City Council and has not been formally agreed at this stage.

5.11. The phasing of nursery, primary and secondary provision has been informed by the annual education demand modelled by the AECOM SIF and considered against the agreed trigger points for these facilities. This is set out within the Tables in Chapter 6. The first primary school is identified as required on site by 2019 and the secondary school is required on site by 2025.

5.12. HCC have been consulted throughout Stage 2 with regard to school sizes and build costs. The current space and cost standards utilised by the County Council have been shared with the AECOM and G&T team. We understand however that the schools at Welborne do not have to be delivered by the County Council and as such best practice cost assumptions will be utilised by G&T from comparable and recent school projects.

5.13. Community facilities will be focused within a single co-located hub located within the District Centre area and include 1,000 sq.m of multi-purpose community space, flexible art/culture space, 227 sq.m of library space, an indoor sports facility (c. 400 sq.m) and Safer Neighbourhood Team police space. This proposal differs from the Stage 1 IDP which proposed three community facilities across the site. From a viability perspective it was seen as prudent to update this to a single focused facility within the District centre. There is of course the potential for third parties to deliver further community facilities in reserved space within the Local Centre and Community Hub which might include facilities such as places of worship and nursery provision.

5.14. Primary care provision will also be focused within a single hub facility located within the District Centre area. The primary care facility is proposed with a capacity for at least eight GPs and 1,530 sq.m of space. Additional space within the centre for dental surgeries will also be included.

5.15. Leisure and Recreation facility recommendations as sourced from the FBC Leisure and Recreation implementation Plan have been largely maintained with some rationalisation where possible in line with the slight reduction in population from the latest housing proposals.

Green Infrastructure Project Updates

5.16. The analysis presented in the previous chapter on required levels and types of green infrastructure have been utilised by LDA design and the preferred option has ensured that these requirements are met as a minimum level of provision. In some cases, such as natural green space and local nature reserves, the potential level of provision on site is greater than that required as a result of the master planning exercise. Therefore the Green Infrastructure items listed in the IDP project list reflect the Concept Masterplan rather than the assessed requirement.

5.17. Table 2.2 presented in chapter 2 sets out the latest Green Infrastructure proposals for Welborne.

5.18. Off-Site Suitable Alternative Natural Green Spaces (SANGS) are required by Natural England to mitigate the impact of the population generated from the scheme. The current approach towards calculating SANGS requirements and creating adequate proposals as set out in the IDP Project list has been clarified through Green Infrastructure workshops and the HCA ATLAS review and can be summarised as follows:

- NE has indicated that it would expect a combination of accessible Land and financial contributions to mitigate impacts.
- NE requires 8ha of SANGS per 1,000 population. An interim position of agreement from NE has suggested 70% of units will need to be mitigated this way and 30% will mitigate through financial contribution to the Solent Disturbance and Mitigation Project (SDMP)
- The Strategic Framework generates requirement for 84.8ha of SANGS
- The Framework plan assumed 70.56 Ha of off-site adjoining land will contribute towards the 84.8 ha requirement:
    - Dash Wood (38.13ha)
    - Knowle Triangle (14.89 ha)
    - Fareham Common (17.54 ha)

- This 70.56 ha of land will need to be upgraded to meet Natural England SANGS requirements. As a minimum each of the areas will need:
    - Car parking (including signage)
    - Provision for long walks, runs and dog walking (a choice of routes around 2.5km and walks up to 5km), footpaths should be surfaced but not tarmac and routes should be way marked
    - Limited number of benches, information points etc.
    - 'semi natural looking landscape with plenty of variation' which for Knowle Triangle and Fareham Common means a fairly substantial landscape scheme to change from its current agricultural use while Dash Wood may only require more modest management of the existing woodland.

- Remaining requirement for 14.24 ha will be provided by on-site GI performing dual role. This area will require upgrade of semi natural space on site to SANGS grade as well.

Transport Infrastructure Project Updates

5.19. Since the Stage 1 report in February 2013, AECOM have been working to refine the transport infrastructure costs to reflect the outputs of stakeholder assessments and updates to the Masterplan. Parsons Brinckerhoff has been developing the transport strategy for the Masterplan, which has involved working closely with stakeholders including Transport for South Hampshire (TfSH), Hampshire County Council (HCC) and the Highways Agency (HA) in the development and review of scheme options for the proposed M27 J10 improvement scheme. AECOM have inputted at a prioritisation workshop with the client group and a workshop with the landowners and their consultants to share information on the assumptions and evidence base behind the development of the infrastructure costs.

5.20. The current vehicle access strategy is focused on the A32 and the M27 J10. Based on the transport strategy it is proposed to provide three main junctions on the A32, including two new 4-arm junctions and improvements to the existing Knowle Road roundabout. It is understood that the design of the two new junctions is not yet fixed in terms of form, however the cost estimates from Parsons Brinckerhoff are robust to reflect roundabouts being the most costly design scenario. Given the significant volume of additional vehicle trips that will be generated by the proposed development, it is proposed to widen the section of the A32 between the M27 J10 and Knowle Road roundabout as part of a street transformation project to accommodate traffic and provide a suitable gateway to the site. Pedestrian crossing facilities to link the development areas either side of the A32 are assumed to be provided as part of the new access junctions, and negate the requirement for a pedestrian bridge over the A32 which was included in earlier versions of the infrastructure schedule, providing a cost saving of around £2.5m.

5.21. There are currently 3 options being considered for the M27 J10 improvement scheme, which will inform the final layout following iterative option testing at both a strategic and local level. Whilst in transport terms all 3 options work for planning reasons, option 3 is the preferred design at this stage, and this scheme comprises a dumbbell interchange to the west of the A32 and a new westbound off slip. Ongoing discussions with the HA will inform whether this is the most appropriate solution. The cost estimate has been informed by Parsons Brinckerhoff and includes 45% optimism bias which is normal practice for schemes at this early feasibility stage of design in line with central government guidance. The current transport infrastructure schedule does not include any costs associated with interim improvements to the existing east facing on slip or mitigation at M27 J11, although discussions with the Highway Authorities regarding the need for these two schemes in relation to Welborne are ongoing and infrastructure costs could be subject to change.

5.22. Off-site highway improvements will be needed to mitigate the impact of the development on local urban and rural roads in proximity to the development. At junctions mitigation works are likely to be focused on the A32/A334 Fareham Rd, A32 North Hill/Kiln Road, A32/North Hill/Park Lane, A32 Sainsbury's roundabouts, the A27/A32 Delme Roundabout and the A27 Station roundabout (the later has identified funding from elsewhere). The costs set out in the infrastructure schedule are indicative at present as no detailed work has been undertaken, and assessments by Parsons Brinckerhoff are currently ongoing to inform requirements and costs could be subject to change.

5.23. The primary and secondary road infrastructure costs provide outline feasibility estimates based on the Concept Masterplan drawings. Following discussions with the Borough Council and Highway Authority it has been assumed that the primary and secondary roads at the site would

be adopted by the Local Highway Authority, and a commuted sum to the value of 25% of the construction costs of the highway works is assumed in line with AECOM's previous experience at other sites and discussions with HCC. Earlier versions of the infrastructure schedule included a dedicated Bus Rapid Transit (BRT) lane running alongside the primary road network. However the current working assumption is that the buses would use the existing highway on routes external to the site with on-site provision to be determined. Bus priority measures will be provided at key external and internal junctions. The assumption that there will be no dedicated provision has provided a significant cost saving, however the Highway Authorities preference remains for a dedicated on-site provision if this is achievable. The internal road costs assume 3 pairs of bus stops on-site.

5.24. The cost information associated with the Knowle Rail Halt was provided by Network Rail (Jaime Rockhill) in an email dated 25th March 2013. Off-site bus infrastructure improvements will be required in relation to BRT proposals, and following discussions with HCC the infrastructure schedule allows for a contribution towards improvements to existing bus stops and High Street to the south of M27 J10. Earlier versions of the infrastructure schedule included improvements at Station Road roundabout, which are fundamental in terms of improving access for all between Welborne and the railway station. However funding amounting to £6.6m has now been secured for this improvement which is planned to be delivered in 2016/17, and this has provided a significant cost saving to the project of around £5m.

5.25. Local bus service provision to the Welborne site will need to be improved and the infrastructure schedule includes costs associated with some pump-priming of the local services in the earlier stages of the development, followed by support of the new BRT link between the site and Fareham Rail Station before the development attains a critical mass. The bus subsidy covers pump-priming the existing local bus service that runs past the site to go from 1 service an hour to a 30 minute service to support the initial phases of the development (1,500-2000 units), The subsidy then transfers to support the BRT service and will form an extension to the existing Gosport to Fareham Eclipse service which runs via Fareham Rail Station to the bus station and will then be extended north to Welborne. The subsidy will not therefore be for a whole new service but instead an extension to an existing successful route until around 3,500-4,000 units are occupied in order to deliver the required patronage.

5.26. The costs associated with implementing an Area Wide Travel Plan at Welborne have reduced by approximately £1m to reflect the shorter build out period of 20 years instead of 25 years which was previously used as the basis to inform the cost estimate. The costs set out in the schedule for improvements to the walking and cycling infrastructure are indicative at present as no detailed work has been undertaken, and assessments by Parsons Brinckerhoff are currently ongoing to inform requirements and costs could be subject to change.

Utility Infrastructure Project Updates

5.27. The initial scheme assessment and consultation with the key utility service providers undertaken as part of the Stage 1 IDP remain as an important step which has established the base requirements of the development and an important line of communication between Fareham Council and the Service providers.

5.28. The utility providers will not in most cases commit further resources to refine costs or feasibility analysis for infrastructure projects until greater detail or certainty is established for the Welborne development. However, AECOM and FBC continue to dialogue with Portsmouth Water, Scotia Gas networks, SSE and Southern Water and have received some additional advice and cost estimates which have fed into the latest stage 2 Project List and will be taken into consideration by Gardiner and Theobald.

5.29. The key utility projects remain as set out in the Stage 1 IDP with the undergrounding of the overhead power lines and diverting of the water mains remaining as working assumptions consistent with the Concept Masterplan. Multiple options remain with regards to the foul water discharge connection with both the potential to connect to Peel Common Wastewater Treatment Works and the option to discharge to Knowle STW operated by Albion Water still options.

5.30. Use of a District Energy Network (DEN) is still recorded as an aspirational energy solution for Welborne but the traditional energy solutions have been included as a baseline approach and will inform the cost exercise carried out by Gardiner and Theobald. FBC have highlighted the fact any District Energy Networks should not be a burden on the development. HCC have recently completed a feasibility report into four variations of a potential District Energy Network which is being taken into consideration by Fareham Council.

5.31. AECOM have reviewed the potential SUDS proposals for the Concept Masterplan which at this stage are conceptual rather than detailed. However, detailed site filtration analysis commissioned by the BST Group has been shared with AECOM and has informed this review and the subsequent cost considerations of Gardiner and Theobald.

5.32. The latest Concept Masterplan drawing will be used by Gardiner and Theobald to update the cost estimates for the site wide gas and electricity, potable water and foul water network.

6. Stage 2 Full IDP Project List

6.1. The tables presented on the following pages of this chapter represent the final stage 2 Infrastructure Delivery Plan project list.

6.2. This project list has been used by Gardiner and Theobald to inform the comprehensive scheme costing. All cost estimates provided to AECOM by utility service providers, Parsons Brinkerhoff, Fareham Borough Council and Hampshire Country Council which have been shown in previous iterations of the IDP project list have been shared with Gardiner and Theobald and will be used where these are considered the most appropriate source.

6.3. Costs have not been presented within the IDP project list to avoid any confusion between this infrastructure project list and the full comprehensive G&T development cost schedule although every component listed in this report will be featured in the G&T schedule.

Project	Project Name	Project Description	Project Prioritisation	Project Phasing	Potential Funding Source
SOCIAL INFRASTRUCTURE					
Education Projects					
1.1	**Nursery 1**	Nursery # 1 - Linked to Primary School 1 - Delivered as part of Education Facility - 50 Place Nursery (180m²)	**Policy High Priority**	2019	**Master Developer S106**
1.2	**Nursery 2**	Nursery # 2 - Early stand alone Provision - Delivered by private sector in commercial unit - 50 Place Nursery (180m²)	**Policy High Priority**	2020	**Third Party**
1.3	**Nursery 3**	Nursery # 3 - Linked to District Centre - Delivered by private sector in commercial unit - 50 Place Nursery (180m²)	**Policy High Priority**	2022	**Third Party**
1.4	**Nursery 4**	Nursery # 4 - Linked to Community Hub - Delivered by private sector in commercial unit - 50 Place Nursery (180m²)	**Policy High Priority**	2024	**Third Party**
1.5	**Nursery 5**	Nursery # 5 - Linked to Primary School 2 - Delivered as part of Education Facility - 50 Place Nursery (180m²)	**Policy High Priority**	2026	**Master Developer S106**
1.6	**Nursery 6**	Nursery # 6 - Linked to Primary School 3 - Delivered as part of Education Facility - 50 Place Nursery (180m²)	**Policy High Priority**	2030	**Master Developer S106**
1.7	**Nursery 7**	Nursery # 7 - Linked to Local Centre - Delivered by private sector in commercial unit - 50 Place Nursery (180m²)	**Policy High Priority**	2035	**Third Party**
1.8	**Primary School 1**	**First Primary School** - Associated with District Centre - 3 FE primary School - In accordance with HCC Requirements land required: 2.82 Ha - Triggered to open with over 1FE of demand unprovided on Site - Expectation that facilities at primary schools will be shared for community use at some times	**Essential**	2019	**Master Developer S106**
1.9	**Primary School 2**	**Second Primary School** - North of Knowle Rd (Local Centre) - 2 FE Primary School - In accordance with HCC Requirements site needs to be scaled for potential expansion to 3FE. Land required therefore needs to be 2.82 Ha - Triggered to open with over 1FE of demand unprovided on Site - Expectation that facilities at primary schools will be shared for community use at some times	**Essential**	2026	**Master Developer S106**
1.10'	**Primary School 3**	**Third Primary School** - West of Dean Farm (with Community Hub) - 2 FE Primary School - In accordance with HCC Requirements site needs to be scaled for potential expansion to 3FE. Land required therefore needs to be 2.82 Ha - Triggered to open with over 1FE of demand unprovided on Site - Expectation that facilities at primary schools will be shared for community use at some times	**Essential**	2030	**Master Developer S106**
1.11	**Secondary School**	Secondary School - 7FE Secondary School - Triggered to open when half of site demand does not have permanent provision on Site - Expectation that facilities at Secondary school will be shared for community use at some times	**Essential**	2026	**Master Developer S106**

Project	Project Name	Project Description	Project Prioritisation	Project Phasing	Potential Funding Source
Community Facility Projects					
2.1	**District Centre Community Building**	**Multi-purpose community centre building in District Centre** 1,000 sq.m community and flexible art/culture space + 227 sq.m library space + Indoor Sports facility (c.400 sq.m) + SNT Police Hub (Minimum of 168m² net Police SNT Space for 7 x PCSOs) + Public Parking	**Policy High Priority**	2020	**Master Developer S106**
2.2	**Community Hub Community Facilities**	**Community Hub Community Facilities** Potential for Third Party to deliver further community facilities in reserved space (could also house place of worship, nursery provision etc)	**Desirable**	2028	**Third Party**
2.3	**Local Centre Community Facilities**	**Local Centre Community Facilities** Potential for Third Party to deliver further community facilities in reserved space (could also house place of worship, nursery provision etc)	**Desirable**	2035	**Third Party**
2.4	**Public realm**	Public realm provision, including landscaping and public squares in district and local centres and public art (to include the District Centre 'Market Square')	**Policy High Priority**		**Plot Developer S106**
2.5	**Community Development**	Costs applied to at least 15 year timescale as community develops. Winchester and Havant guidelines suggest sum of c.30,000 per annum over this period	**Desirable**		**Master Developer S106**
Health Facility Projects					
3.1	**Primary care centre**	**Primary Care Centre** - One health centre part of co-located District Centre hub - Capacity for at least 8 GPs (1,530 sq. metres). - Additional space within DC for dental surgeries.	**Essential**	2024	**Master Developer S106**
3.2	**Extra care housing**	**Extra Care Housing** - 16 units - at 2036 - Demand would rise to 34 by 2050) Draft FBC policy seeks delivery of at least 1 economically viable scheme (60+ units), with a large portions being affordable rent. FBC and HCC committed to Extra Care. Land for provision of Extra Care units will be required to be transferred to HCC at nil consideration.	**Policy High Priority**	linked to trajectory	**Third Party**
3.3	**Pharmacy 1**	**Pharmacy #1** - ground floor unit in mixed use plots - Fit out only	**Desirable**	2024	**Third Party**
3.4	**Pharmacy 2**	**Pharmacy #2** - ground floor unit in mixed use plots - Fit out only	**Desirable**	2033	**Third Party**
3.5	**Optician 1**	**Optician #1** - ground floor unit in mixed use plots - Fit out only	**Desirable**	2024	**Third Party**
3.6	**Optician 2**	**Optician #2** - ground floor unit in mixed use plots - Fit out only	**Desirable**	2033	**Third Party**
Leisure & Recreation Projects					
4.1	**Artificial grass pitch**	**Full Size Artificial Grass Pitch** - For community use - 1 x Full Size Artificial Grass Pitch - Typical Type 4 or 5 MUGA standards (minimum Size of 5,000 m²)	**Policy High Priority**	"Early phases"	**Third Party**
4.2	**Bowling green**	**Bowling Green** -1 Green approx 1700m² per Court	**Desirable**	2026	**Master Developer S106**
4.3	**Tennis court 1**	**Tennis Court #1** - Tennis Court approx 670m² per Court	**Desirable**	2020	**Master Developer S106**
4.4	**Tennis court 2**	**Tennis Court #2** - Tennis Court approx 670m² per Court	**Desirable**	2024	**Master Developer S106**
4.5	**Tennis court 3**	**Tennis Court #3** - Potentially part of school site - Tennis Court approx 670m² per Court	**Desirable**	2028	**Master Developer S106**
4.6	**Tennis court 4**	**Tennis Court #4** - Potentially part of school site - Tennis Court approx 670m² per Court	**Desirable**	2032	**Master Developer S106**
4.7	**Contribution to swimming pool provision**	Swimming Pool Provision - IDP analysis suggests demand of 500 sq.m of water provision - Expanded provision at Fareham Leisure Centre (Park Lane) and/or contribute towards new planned provision at Locks Heath	**Desirable**	??	**Master Developer S106**

Project	Project Name	Project Description	Project Prioritisation	Project Phasing	Potential Funding Source
GREEN INFRASTRUCTURE					
Green Infrastructure Projects					
5.1	**Local Play Space (0-11 ages)**	**Local Play Space (0-11 ages)** - Minimum of 3,900m2 of local play spaces distributed through a number of spaces (max of 13) - mminimum size of 300sq.m - Located within 300m of the demand - 0.39 ha of amenity park upgraded to this provision	**Desirable**	From 2015 onwards as site develops	**Master Developer S106**
5.2	**Neighbourhood Play Space (all ages)**	**Neighbourhood Play Space (all ages)** - Minimum of 3,900m2 of neighbourhood play spaces distributed through a number of spaces (max of 8) - Minimum size of 500sq.m - Located within 600m of the demand - 0.39 ha of amenity park upgraded to this provision	**Desirable**	From 2015 onwards as site develops	**Master Developer S106**
5.3	**Youth Play Space (12+ age group)**	**Youth Play Space (12+ age group)** - Minimum of 2,600m2 of youth play spaces distributed through a number of spaces (max of 13) - Minimum size of 200sq.m including at least 1 MUGA - Located within 300m of the demand - 0.26 ha of amenity park upgraded to this provision - with potential for BMX track, skateboard ramps etc).	**Desirable**	From 2015 onwards as site develops	**Master Developer S106**
5.4	**Playground Play equipment**	Provision of 42 pieces of play equipment, in association with the designated play spaces	**Desirable**	From 2015 onwards as site develops	**Master Developer S106**
6.1	**Parks and Amenity Open Space 1 - The Downs' Park**	**20 Ha Park and associated amenity space** *- This could be broken down into several smaller sites although there are benefits in a large site*	**Policy High Priority**	??	**Master Developer S106**
6.2	**Parks and Amenity Open Space 2 - 1 small local park**	**2.8 Ha local park**	**Policy High Priority**	In line with completion of substantial neighbourhoods	**Master Developer S106**
6.3	**Playing Pitches and Outdoor Sports**	**11.05 ha of Playing pitches** - Total Requirement of 18.2 Ha for total Population but assumed use of 7.15 ha of secondary school playing pitches - Assumption Requires full community use of playing pitches) - to be confirmed with HCC Education	**Policy High Priority**	Some provision prior to school Delivery?	**Master Developer S106**
6.4	**Allotments**	**2.1ha of allotment provision**	**Desirable**	Early Delivery - place making	**Master Developer S106**
6.5	**Semi Natural Greenspace**	**63.2 ha Semi Natural Greenspace.** - Made up of nature reserves and natural green space - Managed to improve biodiversity and might include wetland/ponds as part of the SuDS etc. - This is 17.8 ha in excess of amount required through standards	**Policy High Priority**	Less likely to be linked to build out -potential early win - place making	**Master Developer S106**
6.6	**Remaining Incidental GI - Landscaping**	**8.7 ha of remaining green infrastructure** - Not a policy requirement but result of Masterplanning	**Desirable**	Less likely to be linked to build out -potential early win - place making	**Master Developer S106**
6.7	**Adoption and Management of Site wide GI**	**Adoption and Managment of GI** - Potential for Landowners to set up a management company to undertake the work and this would therefore be a cost to the house purchaser rather than the development. - Also Potential option for adoption and management of Green Infrastructure by FBC with a commuted Sum Required.	**Desirable**	Through Project Delivery and After 2036	**Master Developer S106**
7.1	**Off-site SANGS - Physical provision**	**Provision of further Suitable Accessible Natural Green Space:** - NE require 8ha per 1000 population. An interim position of agreement from NE has suggested 70% of units will need to be mitigated this way and 30% will mitigate through financial contribution to SDMP (see item below). - 6000 units requires 84.8 ha of SANGS. - Current Framework plan assumed 70.56 Ha of off-site adjoining land will contribuite towards the 84.8 ha requirement and the remaining 13.1 ha will be provided by on-site GI performing dual role. - SANGS land current proposed for inclusion is: Dash Wood (38.13ha), Knowle Triangle (14.89 ha), Fareham Common (17.54 ha) - The 70.56 ha of land will need to be upgraded to meet Natural England SANGS requirements (i.e gravel car park, circular footpaths and trails, some nature conservation etc).	**Essential**	Through Project Delivery in line with resident increase	**Master Developer S106**
7.2	**Off-site SANGS - Financial Mitigation**	**SANGS Financial Contribution:** - Other off-site mitigation measures required by Solent Recreational Disturbance Study (applied to 30% of the Welborne population) - Through a contribution towards the SDMP. - Latest guidance from ATLAS workshop suggests the NE charge is likely to range from £250 to £500 per unit. A mid point of £375 will be used for costings. (i.e £375 x 30% x 6000 dwellings = £675,000).	**Essential**	Through Project Delivery in line with resident increase	**Master Developer S106**

Project	Project Name	Project Description	Project Prioritisation	Project Phasing	Potential Funding Source
TRANSPORT INFRASTRUCTURE					
Highways Projects					
8.1	**M27 Junction 10 Interim Improvements**	Capacity improvements to the existing eastbound on slip	**Critical**	2018	**Master Developer S106 / Public Funding**
8.2	**M27 Junction 10 Improvements (including new southern access junction with the A32)**	M27 J10 / A32 junction improvements including slip lanes and junction improvements to facilitate all directional movements. - Trigger point - 1,000 units (2020) - Emerging costs associated with Junction 10 range as follows: - Option 1 = £26.2 Million - Option 2 = £30.0 Million - Option 3 = £34.4 Million	**Critical**	2018-2022	**Master Developer S106 / Public Funding**
8.3	**M27 Junction 11 Improvements**	Works to Junction 11.- It cannot be determined at this time if works are required and may not be attributed to the scheme.	**Critical**	2018-2022	**Master Developer S106**
8.4	**Primary Street Network**	Internal Primary Street Network, including provision for pedestrians and cyclists along these routes.	**Essential**	From 2015 onwards as site develops	**Master Developer S106**
8.5	**Secondary Street Network**	Internal Secondary Street Network, including provision for pedestrians and cyclists along these routes.	**Essential**	From 2015 onwards as site develops	**Master Developer S106**
8.6	**Adoption of on-site street network**	Adoption of internal street network. These streets and junctions are required to be constructed in accordance with the Highway Authority's guidelines and would typically be adopted by way of an Agreement between the developer and the Council under section 38 of the Highways Act 1980. The developer will provide a committed sum of money to Hampshire County Council a financial committed sum of money to cover future maintenance of the adopted road network.	**Essential**	From 2015 onwards as site develops	**Master Developer S106**
8.7	**A32 Northern site access**	4-arm roundabout at Forest Lane providing northern access to site.	**Critical**	2016	**Master Developer S106**
8.8	**A32 Knowle Road roundabout**	Minor works to improve the existing roundabout.	**Critical**	2016	**Master Developer S106**
8.9	**A32 access (Central)**	A32 central site access between the Knowle Road roundabout and M27 J10 - 4 arm signal junction.	**Critical**	2015	**Master Developer S106**
8.10'	**A32 Corridor**	Street transformation project including alterations and traffic management to A32 including widening of approximately 1km section between Knowle Road roundabout and M27 J10.	**Critical**	2016	**Master Developer S106**
8.11	**Off-site traffic management (rural)**	Traffic management and traffic control measures on surrounding rural roads that will be impacted by Welborne development traffic, including A32 North and Pook Lane	**Essential**	2022	**Master Developer S106**
8.12	**Off-site traffic management (urban)**	Traffic management and traffic control measures on surrounding urban streets that will by impacted by Welborne development traffic. Key junctions are: A32/A334 Fareham Rd Wickham; North Hill/Kiln Road; A32/North Hill/Park Lane; A32/Wallington Way/Southampton Road; Delme Roundabout; Quay Street Roundabout; Station Roundabout.	**Essential**	2015/16 to 2017/18	**Master Developer S106**
Railway Projects					
9.1	**Cycle parking (Fareham Station)**	Cycle parking facility at Fareham Rail Station as this will be the principle interchange for rail access for Welborne. - Cost Estimates received from Network Rail	**Essential**	2015	**Master Developer S106**
9.2	**Knowle Rail Halt**	Rail halt at Knowle and track enhancements.- Cost Estimates received from Network Rail	**Desirable**	2036	**Private/Public Funding**
Bus Projects					
10.1	**On-site BRT network**	Implementation of BRT priority measures at 4 internal junctions, to allow for signal equipment and localised carriageway widening. - BRT network not running on independent lane - cost reduced significantly. - to be reviewed based on details of BRT junction requirements. 50% scheme cost Phase 1 50% scheme cost Phase 2	**Essential**	Phase 1 2016/17 to 17/18, Phase 2 2020	**Master Developer S106**
10.2	**Off-site BRT infrastructure**	Bus infrastructure measures for proposed BRT routes to serve Welborne in immediate vicinity of site 1. M27 J10 south to High Street (£500,000).	**Essential**	2019	**Master Developer S106**
10.3	**Bus Operational Subsidy**	Bus operational subsidy to implement a new route between Welborne and Fareham Bus and Rail Stations, which will link the site to the wider BRT route network, with a service frequency of 4 buses an hour. 1 additional bus service per hour is subsidised until approximately 2,000 units are occupied (2 per hour) 2 additional bus services are subsidised until approximately 4,000 units are occupied (4 per hour) 2016 to 2022 - 7 years at £150,000 per annum, £1,050,000 2022 to 2028 - 6 years at £300,000 per annum, £1,800,000	**Essential**	2016-2028	**Master Developer S106**
10.4	**Local Bus Infrastructure**	Local bus infrastructure with new bus stops on Welborne site and improvements to existing bus stops on key routes serving the site, including implementing real time information facilities.	**Essential**	Phase 1 2019, Phase 2 2025	**Master Developer S106**

Project	Project Name	Project Description	Project Prioritisation	Project Phasing	Potential Funding Source
Smarter Choices Projects					
11.1	**Smarter choices**	The increasing use of travel planning and softer measures, often identified as "smarter choices" techniques, offers a cost effective method of maximising access and travel opportunities without increasing traffic impact. For Welborne it is envisaged that similar techniques should be applied, with the funding of an Area Wide Travel Plan and related projects from development site contributions. The costs associated with smarter choices techniques should be implementing, running and managing an Area Wide Travel Plan and associated softer measures. It is envisaged that a developer funded Area Wide Travel Plan managed via the Transport Management Association would be in operation from prior to the initial occupation of Welborne site up to the completion of the site, which is assumed to be fully built out over a 20 year period.	**Essential**	2016-2036	**Master Developer S106**
Pedestrian and Cycle Projects					
12.1	**Pedestrian and cycle links**	Pedestrian and cycle linkages into surrounding areas including M27 crossing, Meon Valley trail, Whiteley and Segensworth employment areas to the west, Safe access to Henry Cort School, north-south Wickham to Fareham route and other links and necessary improvements to the off-site network.	**Essential**	Phase 1 2016, Phase 2 2021	**Master Developer S106**

Project	Project Name	Project Description	Project Prioritisation	Project Phasing	Potential Funding Source
UTILITY INFRASTRUCTURE					
Energy Projects					
13.1	**On-site gas infrastructure**	Conventional Energy - Gas Supply	**Critical**	From 2015 onwards as site develops	**Master Developer S106**
13.2	**On-site electricity Primary Sub Station**	Conventional Energy - 15 Mega Watt Sub Station	**Critical**	By 2018/19 when 500 units are occupied and capacity is reached	**Master Developer S106**
13.3	**On-site electricity infrastructure (exc sub station)**	Conventional Energy - Electricity Supply	**Critical**	From 2015 onwards as site develops	**Master Developer S106**
13.4	**Undergrounding of power lines**	Undergrounding of power lines	**Desirable**	Early phases	**Master Developer S106**
13.5	**Renewable energy generation**	Renewable Energy Solutions - At this stage the Draft Plan does not require a site-wide scheme but does seek a District Centre CHP which has not been costed but would be funded and operated by a third party (i.e. E-on or other ESCO / MUSCO) -	**Policy High Priority**	Early phases	**Private/Public Funding**
Potable and Foul Water Projects					
14.1	**Diversion of existing potable water mains**	Potable Water – Diversion of Water Mains with extent of diversion depending on the final agreed comprehensive masterplan and should be discussed with Portsmouth Water Costs to be reviewed in light of email from FBC stating that meeting with Portsmouth Water: "space will need to made available in a service corridor alongside the A32 to accommodate the mains. The costs they have supplied for the IDP so far do not allow for the mains to be put into the road. The service corridor should have no trees on it"	**Essential**	Depends on the final phasing/delivery of the development	**Master Developer S106**
14.2	**New Water Main Network**	New Mains network across site plus network pumps	**Critical**	From 2015 onwards as site develops	**Master Developer S106**
14.3	**Foul water discharge connection**	Foul Water Discharge solution (multiple options at this stage) Current Option 1 - Discharge to Peel Common Wastewater Treatment Works (WTW) Current Option 2 - Discharge to Knowle STW operated by Albion Water This will only be needed if Albion Water or Southern Water is asked to undertake foul water discharge. Potential for Southern Water to provide for - FBC to approach Southern Water. Barratt Homes Ltd v DWR Cymru Cyfyngedig (Welsh Water).	**Critical**	Early phase	**Master Developer S106**
14.4	**On-site Foul Drainage Infrastructure**	On Site Foul Water Drainage	**Essential**	From 2015 onwards as site develops	**Master Developer S106**
14.5	**SuDS infrastructure**	On Site Surface water drainage: *SuDs infrastructure (swales, attenuation ponds, surface drainage and pipes/mains) including potential dual use as green infrastructure)*	**Essential**	From 2015 onwards as site develops	**Master Developer S106**
Waste and Recycling Projects					
15.1	**HWRC**	Household Waste & Recycling Centre (HWRC) HCC has suggested that population of scheme represents 17% of the demand to justify a whole Centre. The appropriate financial contribution will be 17% of the total cost of a new facility (£950,000)." The development will also be responsible for the contribution to HCC as part of their purchase of the land. FBC assuming this equates to £50,320 (based on a office/industrial land value of £370,000 per hectare). This cost is not included but should be taken into account as part of viability assessment	**Policy High Priority**	2020/21 based on occupation of >1000 homes	**Master Developer S106**
15.2	**Recycling points**	Providing 3 communal recycling points at the District Centre, Community Hub and Local Centres (£30,000). - Costs provided by FBC and assumes no land acquisition required and that site is already prepared with hard surface.	**Desirable**	Aligned with District Centre, Community Hub and Local Centres	**Plot Developer S106**
15.3	**Waste collection infrastructure**	Waste & recycling collection infrastructure (bins, vehicles, access, etc) - Costs provided by FBC and assumes no land acquisition required and that site is already prepared with hard surface.	**Essential**	From 2015 onwards as site develops	**Plot Developer S106**
Telecommunication Projects					
16.1	**Telecommunications**	Development to be provided with high-speed fibre-optic broadband. - BT supplies the ducts and cables and a subsidy per home connected. This is likely to make basic infrastructure installation cost neutral. - Capital cost of installation estimate at 1.5 million. Income stream over time likely to off-set cost	**Policy High Priority**	From 2015 onwards as site develops	**Third Party**