

MASTERPLAN BOOK ADDENDUM

Within the Masterplan Book there are some references to assumed dates which need to be amended to the following:

- 2009 Planning permission
- 2010 Start of construction
- 2010-2014 Main Street construction
- 2011 Start of residential occupations
- 2010-2012 Phase 1, years 1-3, south west neighbourhood
- 2013-2015 Phase 2, years 4-6, town centre neighbourhood
- 2016-2019 Phase 3, years 7-9, southern neighbourhood
- 2020-2022 Phase 4, years 10-12, north east neighbourhood
- 2022 Completion of construction

While most of the assumed dates have been changed in this Addendum, the 3 first paragraphs in the section entitled 'Phasing increments 'in Chapter 4c need to be considered in the light of the amended assumed dates above.

There are also references to the proposed size of the Community Park which is being amended from 207ha to 200ha in line with the South Hams District Council adopted Sherford Area Action Plan. The following paragraphs need to be considered in the light of this amendment:

- Chapter 2 – Evidence on the Land: the merging of Principles and Place – Celebrating the Valley – page 32, 2nd paragraph
- Chapter 4bvi – Description of the Proposals – The Broad Strategy – page 238, 1st paragraph
- Chapter 4bvi – Description of the Proposals – The Broad Strategy – Community Park – page 239, 1st paragraph

Chapter 4bi – Housing***Red Tree's Response (p.145)***

The 7th paragraph (beginning “Of the total number...”) is replaced with the following paragraph:

“It could be reasonably predicted that the level of provision of affordable housing at Sherford at the completion of 5,500 dwellings might be between 20% and 45% of overall housing numbers. The percentage will depend on various factors including viability, the level of grant funding available through the term of the development and the tenure mix provided, which will be reviewed from time to time to help match provision to need.”

In the 11th paragraph (beginning “The total housing stock...”) the bracketed words “(see Funding)” are removed.

Community and Social Inclusiveness (p.148)

The last sentence in 3rd paragraph is replaced with the following sentence:

“The levels of affordable housing at Sherford are likely to be higher than this”

Funding (p.155)

The Heading “Shared Ownership Pool” is replaced with the Heading “Reversion”.

Chapter 4bii – Employment, Retail and Commercial***Commercial Property at Sherford (p.166)***

In Table 1 (p.170), the Total D Class should read 49,290sqm, not 42,290sqm.

Spatial Distribution (p.176)

The 1st paragraph is replaced with the following paragraph:

“The spatial plan of Sherford is focused around a High Street which forms the core of the development. According to the Sherford AAP the High Street will contain the largest element of retailing, services and businesses and the highest density of dwellings.”

Phasing (p.177)

The 4th paragraph is replaced with the following paragraph:

“Table 3 suggests that Sherford will need approximately 186 non-residential units built by the time the first phase (700 dwellings) is complete to accommodate the services required by this resident population. This would increase to 761 units by the time the full 5,500 dwellings are in use.”

Figure 2 ‘Phasing Plan’ is replaced by revised Figure 2 in this section of the Addendum.

Table 3 on p.178 is replaced with revised Table 3 in this section of the Addendum.

Table 4 on p.179 is replaced with revised Table 4 in this section of the Addendum.

Table 3: Phasing of Non-Residential Units

Business Type	Cumulative Totals			
	Phase 1 700 homes	Phase 2 2,300 homes High Street	Phase 3 4,000 homes	Phase 4 5,500 homes
Agricultural & materials	0	0	0	2
Building & Engineering	32	46	81	111
Business & Household Services	28	41	72	99
Business Services	63	91	159	218
Civic	3	10	14	20
Domestic Services	5	7	12	16
Education	4	9	11	12
General Retail (High Street)	0	54	54	54
Household Services	13	18	31	42
Leisure	10	14	28	39
Manufacturing	12	17	30	41
Media	1	3	3	3
Neighbourhood Retail	2	3	5	7
Personal Services	9	13	23	31
Transport	2	8	18	23
Utilities & Infrastructure	0	2	2	2
Wholesale	2	7	7	41
Grand Total	186	343	550	761

Table 4: Phasing of Employment Associated with Non-Residential Units

Business Type	Cumulative Totals			
	Phase 1 700 homes	Phase 2 2,300 homes High Street	Phase 3 4,000 homes	Phase 4 5,500 homes
Agricultural & materials	0	0	0	0
Building & Engineering	230	330	573	788
Business & Household Services	199	286	497	683
Business Services	529	761	1323	1819
Civic	21	66	93	166
Domestic Services	38	55	96	166
Education	159	226	284	310
General Retail (High Street)	0	630	630	630
Household Services	100	144	250	344
Leisure	136	190	374	522
Manufacturing	110	158	276	379
Media	0	100	100	100
Neighbourhood Retail	28	41	72	99
Personal Services	195	280	487	669
Transport	20	79	178	228
Utilities & Infrastructure	0	60	60	60
Wholesale	20	70	70	408
Grand Total	1,785	3,476	5,363	7,395

Chapter 4biii – Movement and Transport

Early Delivery (p.182)

The 2nd paragraph is replaced with the following paragraph:

“This will not be the case at Sherford. It is intended that the Main Street, Park and Ride, public transport link, Community Trust, commercial and community facilities will be delivered in the early phases of Sherford. For full details of phasing, please see the Phasing Strategy.”

Cycling (p.182)

Figure 2 ‘Cycle Route Network’ is replaced by revised Figure 2 in this section of the Addendum.

High Quality Public Transport (p.183)

The 2nd paragraph is replaced with the following paragraph:

“The Park and Ride Interchange provides the commercial basis for the early delivery of the High Quality Public Transport (HQPT) system through Sherford. It will create capacity for 1,000 vehicles, and allow for future expansion.”

A38 and Deep Lane (p.186)

The 2nd paragraph is replaced with the following paragraph:

“*Stage 1:* Initially, the existing priority junction between the westbound slip roads and Deep Lane will be upgraded to a signalised layout that will accommodate all existing movements. This signalised junction will be constructed within the existing kerb lines in order to provide sufficient capacity for the Sherford construction traffic.

The Main Street will be constructed in three stages, working in an easterly direction from Haye Road towards Deep Lane, as shown in Figure 2.8 of the Transport Assessment Addendum dated May 2009. The following junction improvement works will be constructed at Deep Lane before the Park and Ride Interchange is constructed and before the Main Street is connected to Deep Lane, as shown in Figure 4:

- The existing spiral westbound merge sliproad will be closed and replaced with a new on slip that will provide access to the proposed Park and Ride Interchange. The proposed westbound merge sliproad will be formed using two 3.65m wide lanes bounded by 1.0m hard-strips and the proposed junction with the A38 will be formed using a lane gain with ghost island merge.
- The width of the westbound diverge sliproad will be increased to accommodate two 3.65m wide lanes bounded by 1.0m hard-strips and the existing junction between the A38 and the existing westbound off slip will be upgraded to a ghost island diverge with lane drop. The junction between the upgraded westbound diverge sliproad and Deep Lane will also be upgraded to form a large signalised junction and vehicular traffic will no longer be permitted to gain access to the

westbound carriageway of the A38 from this junction. The proposed improvements to the westbound diverge and associated junctions with the A38 and Deep Lane are required; firstly, to ensure that its layout will be compatible with the layout of the new westbound merge, and secondly, to provide sufficient capacity to accommodate the traffic generated by the latter phases of the Sherford development.

The existing junction between the eastbound slip roads and Deep Lane has recently been upgraded from a priority arrangement to a signalised layout, and this junction improvement will be capable of accommodating the Sherford construction traffic; therefore this junction will not need to be upgraded further as part of the Stage 1 improvements.”

A379 Corridor from Stanborough Cross to Laira Bridge (p.187)

Figure 5 ‘Haye Road proposed layout’ is replaced by revised Figure 5 in this section of the Addendum.

Figure 6 ‘Stanborough Cross proposed layout’ is replaced by revised Figure 6 in this section of the Addendum.

Chapter 4biv – Infrastructure and Utilities***Foul Drainage (p.213)***

Figure 2 'Foul Water Drainage Strategy' is replaced by revised Figure 2 in this section of the Addendum.

Electricity Diversions (p.215)

The 1st paragraph (including the programme for diversion) is replaced with the following paragraph:

“The overhead 132KVA route passes through the proposed town centre. It is inappropriate to have such power lines in close proximity to occupied premises; accordingly it is programmed to complete the diversions and remove the existing cables before the Main Street is completed.”

Gas diversion and Connections (p.224)

The 2nd paragraph (including the programme for diversion) is replaced with the following paragraph:

“The Kenn to Wixenford 500mm High Pressure gas pipeline crosses the site and passes through the proposed town centre. This main requires to be diverted before the Main Street is completed. There are significant constraints to any development activity in the proximity of the main and it is programmed to complete the diversion works by the time major construction work commences in Phase 1.”

Chapter 4bv – Community Facilities

Reuse/Repair Centre (p.233)

This paragraph is replaced with the following paragraph:

“It is proposed that land for a reuse and repair centre is provided adjacent to the Park and Ride. The Community Trust could collect household goods in order to repair and re-sell or onward deliver to Ivybridge. This innovative proposal may not only generate recycling credits, but also reduce individual vehicle movement.”

Chapter 4bvi – Landscape, Biodiversity, Cultural Heritage, Public Space, Sports and Recreation

Outdoor Provision (p.259)

The following paragraph is added after paragraph 2:

“The total outdoor sports provision may reduce in area if the Schools agree to allow dual use of their pitches. The total provision available for the community will always, as a minimum, comply with the NPFA standard.”

Table 4 on pages 267 - 269 is replaced with revised Table 4 in this section of the Addendum.

Figure 19 ‘Phase 1’ is replaced by revised Figure 19 in this section of the Addendum.

Figure 20 ‘Phase 2’ is replaced by revised Figure 20 in this section of the Addendum.

Table 4: Phasing Strategy (Refer to Figures 19 to 22 for location of Items)

Phase	Year	Item	Description
1	1	1	Main Street and other road works: - Carry out earthworks - Hedgerow removal (seasonal September – February)
		2	- Diversions to footpaths
		3	- Create wildlife crossings to encourage early use by bats, prior to construction operations. This can then be monitored.
		3	- Construct badger tunnel
		5	- Create part of the Civic space in-front of the Secondary School
	1/2/3	6	Advanced Planting (rolling programme): - Plant bat / wildlife corridors (Note: this will involve detail studies for the block structures and likely levels in relation to the high street vertical alignment) - Carry out mitigation works and progress maintenance / management regime.
		7	- Carry out phased management and design work to Sherford Quarry Wood
		9	- A38 noise buffer / corridor planting
		10	- Carry out advanced planting works to Green Corridors where appropriate.
	1	11	Pedestrian Access : - Define the green corridors as ‘permissive’ routes to the Community Park. Provide stiles / informal paths - Arrange footpath diversions
	1/2	10	Green Corridor, Parks and Semi-Natural Greenspace: - Elburton Edge: start to create frontage to the community park in this area
	1/2	13	Sports and Recreation: - Create sports hub pitches (These will provide sports provision for Sherford until Phase 4 when the eastern pitches are constructed and for neighbouring communities)
		7/20	- Construct Youth Centre and NEAP/MUGA
		17	- Construct swimming pool
1/2/3	14	Community Park (rolling programme) : - Carry out advanced woodland planting in phases - Define permissive areas and / or create informal footpaths through the Park area.	

Phase	Year	Item	Description
		15	<ul style="list-style-type: none"> - Create SUDS scheme - Set up a management / maintenance regime to allow sequential shift from farmland to Community Park - Develop potential organic farm / allotment area with access. - Construct 1 wind turbine
	2/3	16	Secondary School : <ul style="list-style-type: none"> - Pitch Construction – 1 yr min. in advance of use
	Ongoing	19	Maintenance, Management and Monitoring: <ul style="list-style-type: none"> - Set up the management regime for the existing farmland areas. - Establish a maintenance regime for transition farmland / open space areas as part of each Phase (refer to plans) - Establish maintenance depot area at East Sherford Farm with re-use, repair, re-cycling facility. - Establish & implement the management / maintenance regime for biodiversity action plan to existing areas. - Avoid bird nesting season: construction works between September & February only - Avoid disturbance to badgers: construction works within 100m of badger setts between September – November only (refer to EIA Chapter 10 for construction methodology in proximity to Badger setts) - Establish maintenance regimes for : <ul style="list-style-type: none"> - Community park - Green corridors - Public open spaces within the Town, including <ul style="list-style-type: none"> - Play areas - Woodland areas
		18	
2	4	19A	Secondary School: <ul style="list-style-type: none"> - Complete civic space in front of the school
	4/5	18A	Sports & recreation: <ul style="list-style-type: none"> - Implement National Cycle Network route through the Community Park
	4/5	6 8 21 22 23 24 28	Green Corridors, Parks and Semi-Natural Greenspace: <ul style="list-style-type: none"> - Start to develop West Sherford wood as a woodland park - Create Town Square and Vealeholme Wood as a Civic Space - Complete green corridor & LEAP to the west of the town centre - Create western gateway and continue the establishment of Elburton Edge Park, including a LEAP and allotment / community garden area. - Divert public footpath to the south of Sherford Quarry - Complete Sherford Quarry as a public park with Adventure Zone. - Continue to strengthen and monitor wildlife corridors.
	4/5	27 25 26	Community Park : <ul style="list-style-type: none"> - Complete advanced planting works and phased integration of farms to Community Park. - Continue to develop a phased increase in facilities / access as required - Provide an informal car park off Brixton Road which could double up with the Memorial Garden
	5/6	29	Primary School: <ul style="list-style-type: none"> - Pitch Construction – 1 yr min. in advance of use
	Ongoing		Maintenance, Management & Monitoring <ul style="list-style-type: none"> - Continue the maintenance, management & monitoring regimes set up in Phase 1.

Phase	Year	Item	Description
3	7	31	West Sherford Wood : - Complete West Sherford wood as a woodland park and LEAP
	8	32	Green Corridor : - Complete Green Corridor alongside East Sherford Farm
	8/9	33	Green Corridor & Parks: - Elburton Edge - Complete the frontage to the community park in this area - Create northern park adjacent to the A38 and complete the north / south green corridor
		34	
	9	35	Community Park : - Complete the main body of the Community Park, apart from the eastern sports provision
	9	36	Primary School 3 : - Pitch Construction – 1 yr min. in advance of use
	Ongoing		- Maintenance, Management & Monitoring; - Continue the maintenance, management & monitoring regimes set up in Phase 1.
4	10/11	37	Sports provision : - Construct the sports pitches / associated facilities on the eastern edge. - Include NEAP/MUGA/LEAP (and skate park (location to be confirmed through public consultation. Refer to Sports Strategy))
	10/11	38	East Sherford Farm : - Develop Community garden area
	11	39 39A	Community Park : - Complete the eastern frontage to the Community Park, - Erect second wind turbine
	11/12	40	Green Corridors & Parks - Create the second northern park adjacent to the A38 - Create circular cycle loop around the town
		41	
	Ongoing		Maintenance, Management & Monitoring; - Continue the maintenance, management & monitoring regimes set up in Phase 1.

Note: Archaeological monitoring and activities are carried out in advance and during construction operations, as required by the EIA.

Chapter 4bviii – Community Trust

The Strategy – Delivery and Transition (p. 282)

The first paragraph is replaced with the following paragraph:

“Simplistically the Community Trust will need a physical location, management and staffing resource and funds to cover overhead. The Management ‘Board’ as discussed above is already embryonic. A Community Trust operational base will be provided in Phase 1, moving to permanent offices in the Town Hall upon its completion.”

Chapter 4c – Phasing Principles and Programme

Key Principles (p.292)

The 1st bullet point is replaced with the following bullet point:

- “create an individual identity for the new community from the outset by establishing a sense of place, focused around neighbourhood centres where quality mixed-use public space is established”

Phasing Increments (p.293)

Figure 1 ‘Phasing Plan’ is replaced by revised Figure 1 in this section of the Addendum.

Phase 1 (p.294)

This section is replaced with the following paragraphs:

“By the end of Phase 1 the first walkable neighbourhood will have been delivered and an initial identity will have been established for Sherford.

In order for Sherford to attract the genuine social mix of families with children that is appropriate for a sustainable new community the developer will ensure that the initial phase of construction includes blocks of land that have a high proportion of family homes within them. Whilst this may, in the early years, lead to slightly disjointed development it will ensure that Sherford attracts people from all walks of life and in doing so draw a diversity of employers to the town. With 700 dwellings complete the population is likely to be around 1,500.

For initial and future families, the first Primary School will be in place. As part of Sherford’s developing relationship with existing communities to the south, it is intended that the south west Sports fields provision will be in place by the end of the phase. The swimming pool will be operational.

In order to deliver strategic objectives the first part of the Main Street will be complete to facilitate initial stages of HQPT.”

Phasing Increments – Phase 2 (p.294)

The first paragraph is replaced with the following paragraph:

“By the end of Phase 2 Sherford’s built form and community will have become established. Schools will be in place, together with facilities for play, sport and young people. The Town Hall will be operational and its initial profile in terms of asset ownership, staffing and role remit as described in the Community Trust Strategy will be in place. The market square will be in full use.

Other community facilities will be available and the Main Street, including the Town Centre High Street and Park and Ride. A commitment to completing the Park and Ride at an early stage facilitates HQPT and provides for considerable vehicle abstraction off the A38.”

Tables 1 – 4 are replaced with the following Tables 1 – 4.

Table 1: Phase 1

Category	Actions	Any Comment or Specific Triggers
Dwellings	700 completed	-
Education	Primary School 1. Temporary Primary School buildings made available with playing fields within the South West neighbourhood.	Initial classrooms available by 1 st dwelling occupation;
Community	Establish Community Trust temporary operational base. Identify site for Town Hall.	Temporary offices / meeting rooms within available retail space or, if more appropriate, spare buildings within the first primary school.
Health	Identify site for Health Care Centre (it is expected that the facility will be open by the end of Year 4).	Temporary facilities for on-site doctors / dentist will be available within spare retail space or on-site temporary buildings.
Public Space and Sports (for full details reference the detailed Strategy)	Advance planting and defining the necessary wildlife corridors.	Prior to removal of existing
	Establish detailed plan for Community Park and advanced planting.	Year 1
	Establish playing fields for the Sports Hub and Secondary School.	Years 2 and 3
	Establish Sports Hub at Elburton Edge.	Complete sports pitches and swimming pool by end of Phase 1
	Initiate development for Organic Farm and allotments.	-
Commercial	Establish south west neighbourhood centre	-
	Approximately 186 units developed	-
Access and Transport	Arrange necessary highway / footpath diversions	Year 1
	Commence development of the Main Street and complete link between south west neighbourhood and Haye Road	Years 1 and 2
	Identify land for the Park & Ride	-
	Undertake initial improvements to A379 corridor to identify bus lanes.	By end of Year 2
Infrastructure	Surface water drainage, foul drainage and other utility provision	Initial facilities available by the first occupation. Expanding in line with housing completions.
	Community Wind Turbines	First turbine will be operational by the 1,000 th dwelling

Table 2: Phase 2

Category	Actions	Any Comment or Specific Triggers
Dwellings	1,600 completed	-
Education	Primary School 1. Permanent schools buildings completed	Year 4.
	Establish Secondary School	Initial phase to provide accommodation for 200 pupils
	Primary School 2. Temporary	Initial classrooms available by 1 st

Category	Actions	Any Comment or Specific Triggers
	Primary School buildings made available with playing fields within the town centre neighbourhood	occupation of town centre neighbourhood.
Community	Establish the Youth Centre on edge of Sherford Quarry and the Forest School within the Quarry.	Years 4 and 5
	Town Hall opens	-
	Establish Maintenance depot area and identify land for repair / re-use centre	-
	Establish Market Square – available for Farmer’s Markets and other community activities.	-
	Library opens.	Year 5/6
Health	Health Centre opens.	Year 4
	Children’s Centre opens	Year 4
	Adult Social Care Centre opens	Year 4
Public Space and Sports	Continue the establishment of greenways and wildlife corridors.	-
	LEAPS/LAPS are completed within the Phase 1 and Phase 2 areas.	-
	Finalise plans and substantially complete works for the Community Park.	Year 6
	Complete Sports Hub, including all associated indoor sports facilities.	-
	Establish links to National Cycle Network routes.	By end of Phase 2
Commercial	Establish Retail / Mixed Use town centre.	-
	Approximately 157 commercial units developed.	-
Access and Transport	Arrange necessary highway / footpath diversions	Year 5
	Stage 1 improvements to Deep Lane junction completed.	Year 4
	Complete Main Street	Year 5
	Establish Park and Ride	500 spaces by Year 4, 1,000 spaces when usage requires
	Proposed improvements to Red Lion Hill completed.	-
	Improvements west of Stanborough Cross are required to be delivered by the Major Scheme Bid.	Subject to monitoring of traffic flows and HQPT service.
Infrastructure	Gas main and overhead electricity line diverted and buried.	Prior to completion of the Main Street from Deep Lane Junction to Stanborough Cross.

Table 3: Phase 3

Category	Actions	Any Comment or Specific Triggers
Dwellings	1,700 completed	-
Education	Primary School 2 established in its permanent location	Year 7
	Secondary School fully operational.	-
	Establish the site for the Primary School 3.	Year 9
Public Space and Sports	Complete West Sherford Wood park and green corridor alongside East Sherford Farm.	Years 7-9
	Initiate the sports facilities in the north of the Community Park.	Year 9
	Create the north-south green corridor between the A38 and the Community Park for the eastern neighbourhood.	-
Commercial	Complete southern neighbourhood core and area north of the town centre which is likely to incorporate business uses.	-
	Approximately 207 units developed.	-
Access and Transport	Northern and Southern Avenues built and fully operational providing route alternatives to Main Street and facilitating on-site permeability.	-
	High Street – HQPT bus may displace parking in the central lane.	Subject to monitoring of the HQPT bus speed and reliability.

Table 4: Phase 4

Category	Actions	Any Comment or Specific Triggers
Dwellings	1,500	
Education	Complete Primary School 3	Initial classrooms available by 1 st dwelling occupation.
Public Space and Sports	Complete sports facilities in the north of the Community Park.	-
Commercial	Establish the eastern neighbourhood centre and business uses along the A38 and around the Park and Ride.	-
	Remaining 211 units developed.	-

Temporary Sites (p.295)

The first paragraph is replaced with the following paragraph:

“Until the Town Hall is built and completed, local community facilities, such as local government activities, Community Trust offices, Crime Prevention Officer and library, can be accommodated in a number of different ways. The building of the south west Neighbourhood centre, in order to create a sense of place, will, in itself, create areas of retail and commercial space that will be unlet until greater numbers of residents move to the Town. Further, temporary structures can be used. These have the added advantage of being portable and therefore able to be moved to the areas of need that will change as the Town grows.

Finally, if appropriate, unused space within the schools can be utilised. This has the added advantage of placing the schools firmly at the heart of the community.”

Chapter 4d – Resource Efficiency of the Built Form***Residential Building Standards (p.302)***

The 2nd bullet point is replaced by the following bullet point:

- “Energy efficiency targets:
 - CO₂ emissions for the first 2,300 dwellings to be 25% below 2006 Building Regulations Part L
 - CO₂ emissions for 2,301 – 4,000 dwellings to be 35% below 2006 Building Regulations Part L
 - CO₂ emissions for 4,001 – 5,000 dwellings to be 50% below 2006 Building Regulations Part L
 - CO₂ emissions thereafter to be 60% below 2006 Building Regulations Part L”

The 3rd bullet point on p.303 is replaced with the following bullet point:

- “20% of all dwellings will be built to Lifetime Homes standards.”

Minimising Waste and Recycling (p.303)

The 5th bullet point is replaced with the following bullet point:

- “Land for a re-use/repair centre will be provided on land close to the Park & Ride facility”

Carbon Performance (p.305)

Table 2 is replaced by the following revised Table 2.

Table 2: Carbon Reduction Measures for Dwellings

Total CO2 emissions for 5,500 dwellings built to 2006 Building Regulations = 19,440 tonnes CO2 / pa

Reductions to Carbon Emissions	Area (m2)	Kg CO2 / pa / m2 saved	Tonnes CO2 / pa saved	% Carbon Reduction compared to total dwelling emissions
0 – 2,300 dwellings – 25%	225,818	9.0	2,032	10.5%
2,301 – 3,000 dwellings – 35%	166,909	12.6	2,103	10.8%
4,001 – 5,000 dwellings – 50%	98,182	18.0	1,767	9.1%
5,001 – 5,500 dwellings – 60%	49,091	21.6	1,060	5.5%
TOTAL			6,962	

Note:

Indicative numbers have been used here in relation to the carbon calculations. Numbers will be refined as we gain greater clarity on the detailed design and engineering for the construction of Sherford.

Table 3: Carbon Reduction from Renewable Energy Measures

Total CO2 emissions for whole site built to 2006 Building Regulations = 29,141 tonnes CO2/pa

Total CO2 emissions for whole site after dwelling energy efficiency measures (ref Table 2) = 22,179 tonnes CO2/pa

Reductions to Carbon Emissions	Area m2	Kg CO2 / pa / m2	Tonnes CO2 / pa	% Carbon Reduction compared to total emissions	% Carbon Reduction after dwelling energy efficiency measures
Wind turbines – large scale (2 x 1.8MW)		3,309	6,618	23%	30%
Wind turbines – small scale	RE from embedded technologies				
Solar Thermal					
Photo-voltaic			2,586	9%	12%
Biomass heating – neighbourhood / building scale					
Biomass CHP – neighbourhood / building scale					
			12,974	Balance of CO2 emissions p.a.	
Carbon sink, 1ha = 400 tonnes	70 ha	400	28000		
Offsetting via carbon sink available for			2.2 years		

Notes:

Indicative numbers have been used here in relation to the carbon calculations. Numbers will be refined as we gain greater clarity on the detailed design and engineering for the construction of Sherford.

This table does not take into consideration the non-dwelling energy efficiency measures and therefore when these are able to be calculated the offsetting available via the carbon sink will increase.

Displaced grid electricity via RE uses 0.591kg/kWh of CO2 from the SAP2009 consultation document

CO2 sequestered figure of 400 tonnes/ha for new woodland is from <http://www.woodlandtrust.org.uk/en/why-woods-matter/woods-carbon/Pages/woodland-carbon.aspx>