

# CHAPTER 3: THE PROJECT TO BE ASSESSED

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## 3.1 THE SCHEME

3.1.1 Outline planning permission is sought, with all matters except access reserved, for a residential-led development at Thornbury; comprising up to [630-595](#) homes, [land for a primary school](#), a Community and Retail Hub, a network of open spaces and supporting infrastructure.

3.1.2 Planning permission is sought in outline (apart from access) and the design detail will be subject to subsequent approvals through the reserved matters procedure which would follow the grant of outline planning consent. The area subject to the EIA is identified by the Site Boundary Plan (Figure 1.1).

3.1.3 The description of development for the purposes of the Application is contained at paragraph 1.1.3 in Chapter 1. In accordance with this description, this EIA has assessed the Proposed Development of:

- [Erection of up to 630-595 dwellings](#) (Use Classes C3);
- [Land for a primary school](#);
- Up to 700m<sup>2</sup> for a Community and Retail Hub (Use Classes A1, A2, D1);
- Green infrastructure including parkland, footpaths, allotments, landscaping and areas for informal recreation; and
- Associated engineering and infrastructure provision including a new road network within the Project Site, new points of access including a bus-only link, electricity substations, surface water attenuation and associated drainage.

3.1.4 The physical aspects of the Proposed Development are expressed in the EIA parameter plans, which show the distribution and scale of the development assessed in the EIA:

- Figure 3.1 – Land Use and Access Parameter Plan (dwg. 9601 Rev [FG](#)).
- Figure 3.2 – Scale Parameter Plan (dwg. 9602 Rev [IF](#)).
- Figure 3.3 – Green Infrastructure Parameter Plan (dwg. 9603 Rev [HL](#)).

3.1.5 EIA project parameters define the extent of the project in terms of scale, mass, quantum of development etc., and allow the likely worst-case and any significant environmental effects to be identified. These parameters allow for a degree of flexibility to ensure that the project can respond to changes in demand or building requirements over the delivery period, which is likely

to be 8 years. For example, maximum storey heights are defined which allows the maximum effect in terms of landscape and visual impact to be assessed, but does not prevent the developer constructing a building of lower height.

3.1.6 The proposed highways infrastructure junction drawings are provided at Figures 3.4 and comprise a series of preliminary access strategy designs:

- Concept Site Access Layout (dwg. SK15 Rev A)

3.1.7 The EIA parameter plans are submitted for approval by SGC, they are not 'illustrative'. If planning permission is granted for the proposal it would include a planning condition to ensure that the development takes place in accordance with the plans. The detailed design of the elements for which outline permission is sought can therefore evolve within these parameters to the extent that they do not give rise to any significant un-assessed effects.

3.1.8 Following a grant of outline planning permission, subsequent applications for the approval of reserved matters would be examined by SGC to ensure that the details submitted fall within the parameters assessed at time of the original planning decision. At this subsequent stage, it is open for a local authority to request further environmental information to be submitted by the applicant if this is necessary to ensure that the effects on the environment are considered in relation to the specific details.

### **Illustrative Plans**

3.1.9 The illustrative masterplans submitted with the planning application are included with this chapter of the ES solely to assist in understanding how the development proposed could be delivered. It is important to note that the scheme may be refined further at the detailed design stage, although this would be substantially in accordance with the masterplan and within the development envelope defined by the parameter plans.

- Figure 3.5 – Illustrative Masterplan (dwg.9410 Rev [GL](#)).
- Figure 3.6 – Illustrative Landscape Masterplan (dwg.16-10-PL-201 Rev [BD](#)).

### Residential Areas

3.1.10 The proposal is for a residential-led development, comprising up to [630-595](#) new homes. These new homes will comprise of a wide ranges of sizes, types and tenures in order to meet the needs of the local population; with the detailed mix to be determined as part of future reserved matter applications. The proposals include provision of 35% affordable housing; equating to a figure of up to [220-208](#) dwellings.

### Community and Retail Hub

3.1.11 The application proposals include the provision of up to 700m<sup>2</sup> of floor space as part of a Community and Retail Hub. The exact location of this within the development would be determined as part of future reserved matters approvals. This floor space could be used for Use Classes A1, A2 and/or D1. The D1 Use Class provides for the potential delivery of [a range of community uses on a health centre on the Project Site, or alternative community uses, as appropriate.](#)

### Development Height

3.1.12 The Scale Parameter Plan (Figure 3.2) seeks to establish maximum height parameters for areas of built development, extending from 2 storey (~~10.54~~m) on the outer edges of the Project Site, and to up to 2.5 storey (~~12.51~~11.7m) within the central parts of the residential development parcels. The Scale Parameter Plan also identifies zones where buildings up to 3 storey (~~12.2~~12.2m) could be located for urban design and legibility purposes. [These heights incorporate a tolerance for earthworks remodelling and are therefore the maximum overall heights of buildings within the site.](#)

3.1.13 These heights have been formulated through a landscape-led approach, taking into account place-making principles and promoting a range of character areas across the Proposed Development.

### Access and Movement

3.1.14 The Land Use and Access Parameter Plan (Figure 3.1) shows two proposed points of vehicular access from Oldbury Lane into the Project Site. Preliminary access drawings have been submitted for approval for each of these junctions (see Figure 3.4); which show ghost island priority T-junctions with right turn lanes.

3.1.15 A Primary Street will form a central spine through the development; linking the two vehicular accesses. The primary street will be designed as a 6.5m-wide carriageway, with a 2m footway, and a 3m shared footway/cycleway located behind a 2m grass verge. The secondary road network will be designed with a design speed of 20 miles per hour, with reduced carriageway widths and cyclists accommodated on carriageway. The detailed internal road network will come forward as part of future reserved matter applications, but will be in accordance with the principles set out in the Design and Access Statement.

3.1.16 A Sustainable Travel Link is identified on the Land Use and Access Parameter Plan (Figure 3.1) which provides a connection to the consented scheme to the east at Park Farm (see Table 5.3). This route ~~will be 9.5m wide and~~ will comprise a bus, cycle and pedestrian link. The bus

link will be a 6.5m wide carriageway, therefore enabling two-way bus movements, ~~and a 3m wide shared foot/cycleway will be delivered to the north.~~

- 3.1.17 Existing routes for pedestrians using the public rights of way are retained, and alongside the new connection provided by the Sustainable Travel Link, a series of pathways will be created based on the proposed green infrastructure and the existing network of public rights of way. The Proposed Development seeks to follow a hierarchy of movement which provides greatest priority to pedestrians and cyclists, followed by public transport, with least priority to the private car.
- 3.1.18 A Framework Travel Plan (FTP) submitted alongside this ES sets out the measures, targets and strategies to encourage the use of sustainable modes of travel, directing journeys away from single occupancy private car trips. The FTP sets the principles for a suite of Travel Plans which will be developed following the grant of outline permission, including a Residential Travel Plan and Occupier Travel Plans (for the uses which come forward in the Community-Retail Hub).

#### Green Infrastructure

- 3.1.19 The scheme design process and landscape strategy has sought to reduce significant impacts on the local area and create a positive landscape structure for the Proposed Development. This includes retaining key landscaping features within the Project Site (i.e. mature trees, hedgerows and landform), the provision of structural landscape planting, maintaining the riparian corridors along Pickedmoor Brook and establishing areas of open space within a green infrastructure network. These are shown on the Green Infrastructure Parameter Plan (Figure 3.3) which confirms the extent of the green infrastructure network. The Design and Access Statement, and Planning Statement, confirm the detailed proposals for the typologies of open space provided within this network.

## **3.2 EIA PARAMETERS**

- 3.2.1 Plans submitted for assessment within this ES and for approval with the planning application are specified below:

**Table 3.1 Plans Assessed in this ES**

<b>Plan Title</b>	<b>Status</b>	<b>Figure</b>	<b>Reference Number</b>
Site Boundary Plan	Definitive	Figure 1.1	9000 Rev H
Land Use and Access Plan	Definitive	Figure 3.1	9601 Rev <a href="#">GF</a>
Scale Plan	Definitive	Figure 3.2	9602 Rev <a href="#">JF</a>

Green Infrastructure	Definitive	Figure 3.3	9603 Rev <a href="#">LH</a>
Concept Site Access Layout	Definitive (Concept)	Figure 3.4	SK15 Rev A

3.2.2 An Illustrative Masterplan and an Illustrative Landscape Masterplan have also been prepared to show how the development can be delivered within the parameters (see Figures 3.5 and 3.6).

### Land Uses

3.2.3 The Proposed Development comprises the land uses and site area/floorspaces as described in Table 3.2 below. This table should be read alongside the Land Use and Access Parameter Plan (Figure 3.1).

**Table 3.2 Proposed Land Use and Site Area / Floorspace**

Land Use	Use Class	Site Area & Floorspace (including reference to Land Use Parameter Plan)
Up to <a href="#">630-595</a> residential units (including 35% affordable housing)	C3	Residential development will be delivered within the areas shown as Residential Development on the Land Use and Access Parameter Plan.
<a href="#">Land for a Primary School</a>	<a href="#">D1</a>	<a href="#">Land within the centre of the site has been defined on the parameter plan to provide a new primary school.</a>
Community and Retail Hub	A1, A2, D1	Up to 700 sqm  A 'Community and Retail Hub' will be delivered with the potential for a range of uses within the Use Classes identified. A location is shown indicatively on the Land Use and Access Parameter Plan, but will be confirmed as part of future reserved matter applications.
Open Space	n/a	Green infrastructure including: <ul style="list-style-type: none"> <li>• parks</li> <li>• allotments</li> <li>• amenity greenspace</li> <li>• natural and semi-natural greenspace</li> <li>• facilities for children / young people</li> </ul>
Associated transport infrastructure	n/a	Access junctions at Oldbury Lane, internal road network and the Sustainable Travel Link.

Associated engineering, infrastructure and landscaping works	n/a	n/a
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### 3.3 UTILITIES AND SERVICES

3.3.1 A programme of new infrastructure, upgrades and diversions will be required to facilitate the scale of development proposed. This will include works to electricity, gas, potable water and foul drainage networks. The details are set out in the Utilities and Foul Drainage Appraisal Report (Technical Appendix 3.1).

- Electricity - overhead 11kV electricity lines and underground cables are present onsite and within the verges of Oldbury Lane. Diversion and undergrounding works to the electrical apparatus will be required and it is likely that the Proposed Development will require three new ground mounted electricity substations to be established on the Project Site.
- Gas - the nearest gas main is located within Park Road, approximately 550m south east of the Project Site. The committed Park Farm scheme (see Table 5.3) is supplied by GTC LP gas mains.
- Oil – a CLH pipeline crosses the Project Site in the north-west corner, and will be retained in-situ with appropriate easements.
- Potable water – there is an abandoned potable water main along the northern boundary of the site, and a private water main within the north of the Project Site. A 125mm diameter distribution main is recorded along Oldbury Lane. The existing private water main will be decommissioned, and appropriate protective works required when constructing the vehicular accesses from Oldbury Lane. Any required upgrade works to the potable water network would be delivered by Bristol Water.
- Waste water – three strategic sewers cross the site, and continue along Oldbury Lane to the receiving sewage treatment works to the north-west. The sewers will be retained in-situ with appropriate easements. Current upgrade works are ongoing within this area, and the capacity of the sewer network will require further consideration, but in accordance with legislation, the requirement to undertake upgrades to accommodate the Proposed Development falls to Wessex Water.
- Communications – existing infrastructure is present along Oldbury Lane, and a connection will be made to this infrastructure.

## 3.4 WASTE

### Construction Waste

- 3.4.1 A Waste Management Strategy has been prepared in relation to the Proposed Development, included at Technical Appendix 3.2, which estimates waste arising from the construction of buildings using established national SmartWaste benchmarks based on the Building Research Establishment's (BRE) Smart Waste Benchmark Data (BRE, 2017).
- 3.4.2 These benchmarks are used to measure construction waste generation from the Proposed Development and relate to waste generation rates where no minimisation, reuse or recycling has taken place. These are the baseline figures from which a reduction in waste arisings will be established.

**Table 3.3 Estimated Construction Waste Arisings**

Development Type	Total Floor Area (GIA) (m2)	Construction Waste Arisings (tonnes)
Residential (C3)	58,149	8,897
Non-Residential	700	110
Total	58,849	9,007

- 3.4.3 The estimated volumes identified can be lowered through good waste management practice. Opportunities to prevent and reduce the generation of construction waste are considered in the Waste Management Strategy, and Construction Environmental Management Plans (CEMP) for each of phase of development covering the management of anticipated waste arisings will be produced by the relevant contractor prior to any construction activities within that phase taking place.
- 3.4.4 Waste arisings related to the earthworks are not considered within the Waste Management Strategy. Earthworks will be addressed in separate Materials Management Plans (following CL:AIRE Code of Practice or similar) within future reserved matters applications. It is intended to largely retain existing ground levels, and achieve a cut and fill balance as far as possible.

### Operational Waste

- 3.4.5 The Waste Management Strategy also includes an estimate of operational waste arising from the Proposed Development for the residential and commercial uses. For residential waste arising, the average household waste produced in South Gloucestershire of 1,039kg of waste per annum has been used; resulting in the Proposed Development creating an estimate

655tonnes of household waste per annum. For the commercial uses, operational waste has been estimated based upon data published by ADEPT and the Department of Education.

### **3.5 CONSTRUCTION METHODOLOGY**

- 3.5.1 This section identifies the construction parameters which have been used by the EIA team to assess the potential for significant environmental effects to arise during the construction of the development.
- 3.5.2 Construction methods are influenced by a combination of factors. These include the existing ground conditions and the preferred methods of the building contractor that will be appointed. As such, a programme for the delivery of the project has not yet been established. Therefore the identification of potentially significant effects at the construction stage (and the identification of suitable mitigation measures) assumes that a generic construction methodology will be required (based on standard construction methods and timings derived from similar developments in similar locations). Clearly the assumptions made will need to be realistic and appropriate to the development proposed, and many will ultimately be defined in the Construction Environmental Management Plan (CEMP).

#### **Construction Traffic and Construction Site Access**

- 3.5.3 Construction traffic movements consider the following sources of traffic:
- Workforce movements to and from site;
  - Deliveries made to site;
  - Removal / import of material from site; and
  - Trips made by associated trades.

#### **Methods of Working**

- 3.5.4 It is anticipated that the contractor's compound will be located within a secure area within the phase under construction and will be relocated as each phase nears completion onto the subsequent phase. The precise nature and location of the contractor's compound cannot be determined at this time, but is assumed for assessment purposes to comprise a small number of "portacabin" type temporary buildings along with a compound containing limited construction materials and vehicles.
- 3.5.5 The following working hours, unless in emergencies, have been assumed in the assessment:
- 08:00 - 18:00 hours Monday to Friday inclusive;
  - 08:00 - 13:00 hours on Saturday; and
  - No work to be carried out on Sundays or Bank Holidays.



- 3.5.6 In order to maintain these working hours, the contractor(s) may require a period of up to half an hour before and up to one hour after normal working hours for start up and close down of activities. This does not include operation of plant or machinery giving rise to noise with the potential to disturb nearby residents or the arrival of any HGV at site before 07:30 hours.
- 3.5.7 It is anticipated that development would be undertaken on a rolling programme of site preparation and construction, allowing earlier phases to be completed and occupied while subsequent phases are constructed. All materials and plant storage will occur on site. No off-site compounds are required. The on-site materials storage compound will be located in a position compatible with the ongoing phases of development.

#### **Anticipated Building Construction Methods**

- 3.5.8 It is intended to largely retain existing ground levels, and achieve a cut and fill balance as far as possible.
- 3.5.9 Ground investigations have not indicated unusual ground conditions within the proposed development parcels and so it is anticipated that construction techniques will be standard. It is considered likely that a number of foundation types might be appropriate, although piling or other penetrative foundation designs are unlikely to be required.
- 3.5.10 At this stage, it is anticipated that the houses will be predominantly of standard brick construction, whilst the community and retail hub buildings are likely to be steel framed and employ more modern techniques.

#### **Construction Environmental Management Plan**

- 3.5.11 Details of measures to protect the environment during the construction of the development will be set out in a CEMP. Such measures will address hours of working, noise, vibration, dust, light spill, wheel washing and control of run-off. It is anticipated that the implementation of the CEMP will be a condition on the planning permission and it will be regularly monitored.
- 3.5.12 The CEMP would be held on-site and could be viewed by all interested parties with contact names, details, lines of communication, and mitigation action plans. All site personnel would be made aware of its existence and undertake to adhere to the guidance.
- 3.5.13 The main contractor would be required to nominate a representative to act as a contact point with the Council, to ensure that any construction issues that may arise are dealt with effectively and promptly. Sub-contractors would also nominate or appoint a suitable team member responsible for liaison with the lead contractor's representative and to ensure that sub-contractor construction activities are managed effectively.

3.5.14 The CEMP will be based on but not limited to the following documents (or subsequent replacements) as a minimum:

- The Construction (Design and Management) Regulations, 2007, Statutory Instrument 2007 No. 320;
- Provisions in the Landfill Directive and associated legislative guidance;
- Pollution Prevention Guideline (PPG) Notes – Environment Agency;
- CIRIA (1996). 'A guide for safe working on contaminated sites. Report 132'. CIRIA London or similar; and
- Health and Safety Executive. 'Protection of Workers and the General Public During the Development of Contaminated Land'. HMSO London.

3.5.15 Throughout the ES measures are set out to mitigate the effects of the proposed development during construction. These would be collated in, and implemented by, the CEMP where appropriate.

#### **Construction Site Waste Management Plan**

3.5.16 Construction waste will be minimised wherever possible through best practice, and the site will be subject to a Site Waste Management Plan (SWMP). An initial Waste Management Strategy accompanies this ES (Technical Appendix 3.2), and a detailed SWMP will be secured by planning condition.

3.5.17 Given the size of the site there will be sufficient space available for handling and storing wastes. This will allow different waste streams to be separated (into, for example, untreated wood, treated wood, metals, plastics, inert wastes, plasterboard, hazardous wastes etc), thereby allowing them to be collected by waste management contractors who specialise in those specific waste streams. There is extensive guidance on good site management practice which makes it unlikely that impacts from construction waste will be significant.

### **3.6 PHASING**

3.6.1 For a project of this scale, whilst it is fundamental that the likely phasing is understood, including when the infrastructure is required, it is also crucial that there is flexibility depending upon the commercial deliverability of the scheme and interest by occupiers. As such, a detailed phasing strategy is not confirmed at this stage, but the planning application approval would be subject to a condition requiring the submission of a phasing plan prior to commencement.

3.6.2 Subject to when planning permission is granted, development is anticipated to commence in 2020, with the first completions in early 2021. The construction period is anticipated to be around 8 years.