



# The Sizewell C Project

## 6.5 Volume 4 Southern Park and Ride Chapter 2 Description of the Southern Park and Ride

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## 2 Description of Development

### 2.1 Introduction

2.1.1 This chapter of the **Environmental Statement (ES)** has been prepared in respect of the proposed southern park and ride facility at Wickham Market (referred throughout this volume as the 'proposed development'). The proposed development would be temporary to support the construction of the Sizewell C main development site. The illustrative masterplan for the proposed development is provided in **Figure 2.1**.

2.1.2 The southern park and ride site (herein referred to as the 'site'), forms part of the Sizewell C Project to which this application for a Development Consent Order (DCO) relates. The proposed development would play an important role in reducing the amount of additional traffic generated by the construction workforce on local roads and through local villages. Two park and ride facilities are proposed – one at Darsham for construction workers approaching Sizewell from the north on the A12, see **Volume 3** of this **ES**, and the other at Wickham Market for those approaching from the south on the A12, provided in this volume. Both park and ride facilities would also intercept traffic movements from locations west of the A12. The construction workforce would then be transported to and from the Sizewell C main development site by bus.

2.1.3 The proposed development would also include a Traffic Incident Management Area (TIMA). If there is an incident within the Sizewell C main development site or external to the Sizewell C main development site on the local road network which requires construction-related vehicles to be held or diverted, the TIMA could be utilised to manage vehicles, and remove them from the public road network while the incident is being resolved. The TIMA would only be used for the parking of heavy goods vehicles (HGVs) when required due to an incident. For the majority of the time, it would be unused with no HGVs parked in this area.

2.1.4 Further detail on the park and ride facilities, in the context of the wider construction transport strategy, is provided in the Sizewell C Project overview in **Volume 1** of this **ES**. Further detail on the site selection and design evolution process is provided within **Chapter 3** of this volume of the **ES**, the **Site Selection Report** appended to the **Planning Statement** (Doc Ref. 8.4) and the **Consultation Report** (Doc Ref. 5.1). The **Planning Statement** also contains further detail on the DCO proposals and a site specific Planning Statement for the proposed development at **Appendix C** (Doc Ref. 8.4). **Appendix 2A** of this chapter contains a set of the proposed development drawings for the southern park and ride.

2.1.5 This chapter presents a description of the proposed development, including:

- The general site layout, site access, buildings and structures, utilities and drainage, landscaping, security and lighting.
- The parameters which identify defined envelopes within which future development would be undertaken.
- The sequence and methods for construction, including material quantities and number of construction personnel and vehicles.
- The operation of the park and ride (e.g. number of vehicles using the facility and frequency of bus services to and from the main development site).
- The removal and reinstatement once construction of Sizewell C main development site is complete.

## 2.2 Site masterplan and design

2.2.1 The site comprises approximately 26.4 hectares (ha) of predominantly agricultural land and highway land located north-east of Wickham Market. The part of the site which would contain the parking and buildings, postal consolidation building and Traffic Incident Management Area (TIMA) is approximately 18ha in size, and located to the east of the B1078/B1116, to the north of the A12. The remainder of the site encompasses a section of the A12, and an associated slip road where highway improvements are proposed to form the site access, and associated signage and road markings, see **Chapter 1, Figure 1.1** of this volume. Further detail on the site and the environmental baseline is provided in **Chapters 1 and 4 to 12** of this volume.

2.2.2 This section describes the proposed masterplan for the proposed development, including:

- site layout/general arrangement;
- site access;
- buildings and structures;
- landscaping and ecology;
- utilities and drainage; and
- security and lighting.

2.2.3 The masterplan for the proposed development is shown in **Figure 2.1**. The masterplan is illustrative, and shows an indicative arrangement that would fulfil the objectives of the proposed development. The proposed development will be controlled by parameters rather than providing a detailed design at this stage. The Environmental Impact Assessment (EIA) has assessed the parameters set out in **section 2.3** of this chapter.

2.2.4 The final proposals for the proposed development, following detailed design, will be in general accordance with the **Associated Development Design Principles** (Doc Ref. 8.3) and in accordance with the relevant plans set out in Schedule 6 and Schedule 7 of the **Draft DCO** (Doc Ref. 3.1), save to the extent that alternative plans or details relating to siting, scale or appearance are submitted by the undertaker and approved by the local planning authority.

a) **Site layout/general arrangement**

2.2.5 **Figure 2.1** provides a layout plan that illustrates the proposed parking areas, welfare and security buildings and structures, and internal road layout, which would be accessed off the slip road from the B1078 towards the northbound A12.

2.2.6 The proposed development would comprise:

- Car parking areas for up to 1,250 spaces (of which up to 40 would be accessible spaces), and up to 12 pick up only spaces.
- Up to 10 spaces for minibuses/vans/buses.
- Up to 80 motorcycle parking spaces.
- Cycle shelters for up to 20 bicycles.
- Bus terminus area, including shelters.
- Security fencing and lighting.
- An amenity and welfare building comprising toilets and staff room.
- A security building including an administration office.
- A security booth adjacent to an exit loop for errant vehicles.
- A smoking shelter.
- A postal consolidation building at the western part of the site to handle and process deliveries.

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- Two landscape bunds and additional planting.
- A proposed access point to the site from the existing slip road leading onto the A12.
- A temporary diversion of bridleway E-288/008/0 around the construction area for the proposed access road.
- Other ancillary development, including signage, road markings, lighting, CCTV and utilities.
- External areas including roadways, footways, landscaping and drainage infrastructure.
- Up to three infiltration ponds and up to seven swales forming part of the Sustainable Drainage System (SuDS).
- Protection of a medium pressure (below two bar) Cadent gas main.
- A TIMA at the north of the site to enable construction-related vehicles (including HGVs) to be held in the event of an incident within the Sizewell C main development site or external to the Sizewell C main development site on the local road network.

2.2.7 Existing boundary vegetation would be retained where possible, with additional screening from the proposed landscape bunds and security fencing where necessary, to provide visual screening from local residential properties, the A12 and local public rights of way (PRoWs).

2.2.8 Soft landscaping, comprising grassed areas and suitably sited tree and shrub planting, would be provided whilst the site is operational and would be removed as part of the removal and reinstatement of the site. However, where agreed with the landowner of the site, the screen planting provided around all boundaries of the site during construction and operation would be left *in situ* following the removal of the proposed development and reinstatement of the site.

2.2.9 All mechanical services plant (such as air conditioning condenser units and air handling units) would be selected to ensure that noise emissions are minimised and fall within acceptable limits.

b) **Site access**

2.2.10 Access to the site would be provided off the slip road from the B1078 which leads to the northbound A12. The site access road would include a deceleration lane. An existing private means of access and PRoW (bridleway E-288/008/0) currently cross the proposed internal access road.

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Use of both the private access and bridleway E-288/008/0 would not be stopped or curtailed but both would be temporarily extinguished to the south of the proposed access road, with vehicles and non-motorised users diverted via the proposed site access road. An existing footway along the slip road would be extended into the site to facilitate journeys on foot.

2.2.11 As shown in **Figure 2.1**, a security booth would be located west of the gate, and access point to the park and ride facility, and north of a turning circle to enable errant vehicles to safely turn and exit the site before they reach the parking area.

2.2.12 The A12 northbound carriageway would be reduced from two lanes to one lane before the northbound slip road from the B1078 joins the A12 to avoid three lanes of traffic reducing to one at this location. It is proposed that the speed limit on the B1078 that crosses the A12 is reduced from 60 miles per hour (mph) to 30 or 40mph, to be agreed with Suffolk County Council (SCC).

c) **Buildings and structures**

2.2.13 **Figure 2.1** illustrates the proposed buildings and structures located within the site, namely an amenity and welfare building (which will include toilets and a staff room), a postal consolidation building, shelters (bus, cycle and smoking), a security building (including administration office), and a security booth. The parameters for these buildings and structures for approval are provided in **Table 2.1**, and are shown on the parameter plan provided in **Figure 2.6**.

2.2.14 The overall design for the proposed buildings and structures has followed the **Associated Development Design Principles** (Doc Ref. 8.3), and has been driven by the desire to make the proposed development as unimposing as is reasonably possible, being of a scale that limits visual impact without compromising functionality.

2.2.15 The proposed buildings on-site would comprise prefabricated modular units, finished in natural colours where they are visible from public viewpoints. They would be temporary and single storey, to be removed following the construction of the Sizewell C main development site. The detailed design of these buildings would be developed within the identified parameters detailed in **section 2.3**, recognising that, although temporary in nature, the proposed development would be *in situ* until it is no longer required for the construction of the Sizewell C power station, which is expected to last 9–12 years.

d) **Landscaping and ecology**

2.2.16 The landscaping strategy for the site has been designed to minimise potential impacts on noise, ecological, amenity and recreational, and landscape and

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visual receptors through provision of landscape bunds and planting. The illustrative landscape plan is shown on **Figure 2.1**. Proposed planting includes grassed areas and tree and shrub planting, using native species.

- 2.2.17** The parking areas and main facilities would be bounded by a 1.8m high security fence. This security fence would prevent personnel using the proposed development from accessing the surrounding habitats. This would have the added benefit of reducing disturbance, habitat damage, and littering within the neighbouring woodland blocks such as Whin Belt and Wonder Grove.
- 2.2.18** Landscape bunds 3m high would be located within the north-west, north-east, east and south-east boundaries of the site, to aid in the screening of the proposed development from the adjacent landscape and habitats features. This would also provide acoustic screening.
- 2.2.19** Badger fencing would be installed around the landscape bunds to prevent badgers establishing setts within the site boundary and so minimise constraints during removal and reinstatement.
- 2.2.20** At the south-east of the site, the landscape bund would be reduced in height to 1m for a width of approximately 6m to fall within appropriate clearances for an existing gas pipe running through this part of the site.
- 2.2.21** The layout of the site has been designed to maximise the benefit of existing screening provided by Whin Belt and the other blocks of woodland to the north, west and east of the site. The woodland blocks would be retained in their entirety and therefore there would be no direct loss of this habitat and its associated species.
- 2.2.22** A buffer distance of 10m is proposed between the site boundary and the landscape bund to the east of the site, and where the site abuts woodland blocks to the west. There would be an additional 10m buffer around the woodland block falling within the site to the west (adjacent to Whin Belt), in which no construction or permanent development would take place. All proposed SuDS, landscape bunds, fencing and facilities would be positioned outside of the buffer zones, where practicable. This buffer would assist in minimising any indirect impacts (e.g. from noise, lighting and human disturbance) on those species using habitats adjacent to the site.
- 2.2.23** In addition, close-boarded fencing would be erected where the site boundary abuts woodland blocks to provide protection from vehicle headlights and noise. The close-boarded fencing would be maintained during operation and until reinstatement is complete to act as a screen for lighting and noise impacts.



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- 2.2.24 All existing boundary hedgerows would be retained other than a short section of hedgerow, approximately 40m in length, which would be lost at the location of the access road. The proposed site clearance plan is shown on **Figure 2.2**.
- 2.2.25 Soft landscaping, including grassed areas, tree and shrub planting would be installed and maintained for the operation of the proposed development. There would also be temporary hedgerow planting along the access road, whilst the park and ride is operational, to replace hedgerows lost during construction. Hedgerows would be re-planted along the original hedgerow line during the removal and reinstatement works as shown on **Figure 2.3**.
- 2.2.26 The landscape planting would be maintained and managed as appropriate throughout the operation of the proposed development, with the replacement of plants which fail to establish as required.
- 2.2.27 Permanent supplementary hedgerows would be planted along the southern and eastern boundaries of the site as shown on **Figure 2.1**. The planting within the parking areas would be removed during the removal and reinstatement works to return the relevant parts of the site to agricultural use. Where agreed with the landowner of the site, the screen planting provided around all boundaries of the site during construction and operation would be left *in situ* following the removal of the proposed development and reinstatement of the site.
- 2.2.28 There is an existing pond located within the site, west of the woodland and abutting the western boundary. This pond would be retained, and so there would be no direct loss of this habitat, and its associated species. This pond would be further protected by the 10m buffer zone around the woodland, within which no construction or permanent development would be permitted.

**e) Utilities and drainage**

- 2.2.29 It is envisaged that construction drainage would be contained within the site through the implementation of temporary SuDS early during construction. Foul sewage arising on-site during construction from the temporary welfare facilities will be collected and tankered off-site for appropriate treatment and disposal until the operational package treatment plant and septic tank are in place.
- 2.2.30 In terms of drainage features during operation, the proposed development would comprise SuDS to attenuate surface water run-off and minimise sediment generation. The SuDS are anticipated to consist of approximately seven swales and approximately three potential infiltration basins. The illustrative drainage plan, including the indicative design and position of the swales and infiltration basins, are shown in **Figure 2.4**.

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- 2.2.31** The proposed drainage strategy for the proposed development would be to drain the surface water run-off to ground through infiltration techniques, such as heavy-duty permeable block paving, infiltration trenches, and/or catchpit soakaways, with the infiltration basins and swales providing additional storage. The swales and infiltration basins are part of the SuDS system which moves run-off around the site, allowing natural filtration and infiltration. Exceedance discharges are perceived to be small and infrequent and, in the unlikely event of an exceedance event, exceedance flows would be routed via the access roads to the lowest parts of the site.
- 2.2.32** Permeable surfaces would be used where possible, e.g. in the main car parking area. Rainwater will percolate through the surface and be temporarily stored in the base of the paving and then be disposed to ground by infiltration. However, some surfaces, such as the access roads, areas used by HGVs and the TIMA, will require impermeable surfaces.
- 2.2.33** Road paved areas and locations where there is a risk of potential highway run-off pollution will be designed to be impermeable. Rainfall run-off water will be removed from the surface via highway gullies, combined kerb drains and channels, etc. These will discharge into an underground drainage network which will outfall to swales and infiltration basin where the rainfall run-off will infiltrate to ground. If required the underground drainage network will include a Class 1 bypass separator which will remove pollutants prior to discharge into the swales/infiltration basins.
- 2.2.34** Run-off from roofed areas would be drained via downpipes and collected in an underground drainage network. The run-off from roof areas will be combined with run-off from paved areas either within the piped network (after run-off from the paved areas has passed through the bypass separator) or within the SuDS system.
- 2.2.35** Foul sewage from the operational facility would be treated on-site via a package treatment works, prior to its discharge by infiltration to ground via the SuDS infrastructure. There would also be a septic tank serving the more isolated security booth, on the access road at the entrance to the site, with field drain infiltration.
- 2.2.36** In terms of utilities, connections would be made to existing local utility services (such as electricity and data) in the public highway, where practicable. Any utility services put in place on-site as part of the construction of the proposed development would be removed during the removal and reinstatement works once the park and ride facility is no longer required. Engagement is ongoing with utility companies to confirm suitable points of connection within the highway.

2.2.37 A medium pressure (below two bar) Cadent gas main runs passes through the site. It is envisaged that no diversion of the gas main would be required, and appropriate protection would be provided for the apparatus, with an easement to allow Cadent access to the main for maintenance as required. Where the gas pipe runs through the proposed landscape bund, the bund would be reduced in height to 1m for a width of approximately 6m to fall within Cadent’s appropriate clearances for this asset.

f) Security and lighting

2.2.38 Lighting would be provided at the site access, along the access road, around the security fencing and within the car parking areas for security and safety reasons. The security fencing would surround the functional park and ride facilities, including the entrance to the facility, the parking areas and internal access roads. This is necessary to mark the boundary of the operational parts of the site and provide security to the site throughout all phases of the proposed development.

2.2.39 In terms of security, the proposed development would comprise:

- security fencing, to a maximum height of 1.8m, bounding the parking areas and main facilities; and
- close-boarded fencing along the internal side of the security fence where the site boundary abuts woodland blocks to provide protection from vehicle headlights and noise. The close-boarded fencing would be maintained during operation and until reinstatement is complete to act as a screen for lighting and noise impacts.

2.2.40 Security would be provided on-site, to be staffed 24 hours a day, supported by CCTV along the security fencing and inside the site, which would be monitored from the on-site security building and security booth.

2.2.41 In terms of lighting, the proposed development would comprise:

- lighting, to a maximum height of 6m including lanterns, along the internal access road, within the proposed parking areas and along the security fencing (for security and safety reasons); and
- lighting, to a maximum height of 10m including lanterns, from the roundabout with the B1078 and along the slip road leading to the site and the northbound A12, to be in accordance with an SCC compliant highway lighting design.

2.2.42 An illustrative lighting plan is provided in **Figure 2.5**.

2.2.43 In terms of the lighting strategy, regard has been given to minimising potential effects on neighbouring residential occupiers and ecological receptors. Therefore, the lanterns would utilise LED-based light fittings to ensure energy efficiency with zero-degree tilt, and lighting columns along the perimeter would be fitted with a demountable shield to reduce backward spill of light.

2.2.44 Operational lighting would be designed so that light spill beyond the site boundary would be minimal (largely less than 0.1lux, with lighting levels potentially between 1.0 and 0.1 lux in only several locations), and there would be no substantive light spillage into adjacent habitats and woodland blocks including Whin Belt. These measures would minimise impacts on nocturnal species such as bats that may use the nearby tree lines or habitats for roosts or foraging.

2.2.45 To further assist on mitigating obtrusive light, a central management system has been proposed for the lighting which would be capable of dimming parts of the site independently from other parts (with the site envisaged to be divided in six to eight main sections), as usage changes through the day. The system would be controlled on-site and would allow for seasonal variations in the operational hours of the external lighting, and would have the following functionality:

- dimming of groups of external lights;
- energy monitoring and reporting; and
- fault reporting.

## 2.3 Parameters

2.3.1 SZC Co. has adopted a parameter approach which defines the envelope for the proposed development. A parameter approach has been adopted in order to ensure that the design process has adequate flexibility to deliver the Sizewell C Project. This approach has followed the Rochdale Envelope, as set out in Planning Inspectorate Advice Note Nine (Ref. 2.1). These parameters have informed the assessment presented in the **ES** and the flexibility being sought is consistent with the findings of the **ES**. The assessment has used a reasonable worst case basis on which to assess and mitigate potential adverse impacts arising from the scheme.

2.3.2 The site location plan and illustrative masterplan are shown in **Figure 1.1** and **Figure 2.1** of this volume respectively. **Figure 2.1** illustrates one possible iteration of a scheme delivered within the defined parameters set out within the application. The parameters of the site assessed within the **ES**, within



which the proposed development may be constructed, operated and maintained are then shown on the parameter plan provided on **Figure 2.6**.

**2.3.3** **Schedule 1** of the **Draft DCO** (Doc Ref. 3.1) describes the authorised development. The **Draft DCO** (Doc Ref. 3.1) states that the development will be constructed, operated and maintained anywhere within the lines or situations shown on the **Work Plans** (Doc Ref. 2.3) (and in accordance with the approved plans, to include a parameter plan), and in accordance with the design principles set out in the **Associated Development Design Principles** (Doc Ref 8.3). The **Draft DCO** (Doc Ref. 3.1) also states that the undertaker may deviate vertically to any extent found necessary or convenient.

**2.3.4** The parameters of the proposed development assessed within the **ES** are contained within the following:

- Parameter plan provided on **Figure 2.6** – this identifies zones within which specific buildings, structures and works identified in **Table 2.1** must be located.
- **Table 2.1** – this identifies maximum building dimensions within the zones shown on the parameter plan provided on **Figure 2.6**.

**2.3.5** The EIA has assessed the illustrative masterplan and the parameters.

**Table 2.1: Parameters for approval for the proposed development**

Parameter Plan Zones	Building/Structure/Works	Maximum Dimensions for approval (m) (height x width x length)
Zone 1	Park and ride facility to include parking areas, lighting, drainage and other landscaping and planting.	
Zone 1A	Amenity and welfare building.	4 x 7 x 14
	Security building.	4 x 5 x 12
	Shelters (smoking/cycle).	3 x 5 x 10
	Bus shelters.	3 x 5 x 10
	Postal consolidation building.	4 x 12 x 19
Zone 2	Security booth.	4 x 5 x 12
Zone 3	Indicative position of landscape bunds.	3m in height.

## 2.4 Description of construction

2.4.1 This section provides an overview of the construction of the proposed development, highlighting the key construction activities, including:

- construction sequence and durations;
- estimated construction vehicles;
- a description of road and footpath realignments, diversions or closures;
- anticipated construction plant and equipment;
- anticipated construction workforce;
- indicative material quantities;
- an overview of construction waste; and
- an overview of construction environmental and traffic management arrangements.

2.4.2 The construction arrangements described in this section provide the basis for the assessment presented in this volume. The details of construction are necessarily broad, and may be subject to modification during the detailed design stage, and/or once a contractor has been appointed.

2.4.3 Construction work would take place during Monday to Saturday 07:00 to 19:00 hours, with no working on Sundays or bank holidays. However, some activities may require working outside of these hours. Where this is the case, East Suffolk Council (ESC) would be notified in advance.

### a) Construction sequence and duration

2.4.4 It is expected that construction work for this facility would take place over a period of approximately 12–18 months and is expected to be operational within the early years of the Sizewell C Project construction programme as shown in the Indicative Phasing Schedule in the **Implementation Plan** appended to the **Planning Statement** (Doc Ref 8.4). This would enable the proposed development to be in place as soon as possible to support the construction of the Sizewell C main development site.

2.4.5 The construction process broadly comprises five overlapping phases, as follows:

- Phase 1: enabling works (duration approximately one month) – formation of a secure and safe access to the site from the existing

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northbound slip road. This would include protection of utilities, site clearance, earthworks, road construction, surfacing, road markings, and signage. Work on the site itself would then progress to clearance of vegetation, mobilisation of site compounds/cabins, and boundary fencing to secure the site.

- Phase 2: earthworks and excavation (duration approximately two months) – clearance of vegetation, levelling of the site, and removal of top-soil (and potentially subsoil) for bund formation, in line with the **Outline Soils Management Plan** provided in **Volume 2, Chapter 17, Appendix 17C** of the **ES**. In parallel, SuDS would be installed and earthworks and excavation for the roundabout would be underway. During this phase, the proposed landscaping would be delivered to provide screening. Security fencing would be installed around the perimeter, replacing the temporary fencing which enclosed the working area.
- Phase 3: laying of materials for parking areas and internal circulation route (duration approximately nine months) – delivery and laying of base materials by dump trucks to the parking and circulation route areas; local movements by excavators and possibly a bulldozer; some compaction of the base layers; drainage work, and kerbstone work. Paving work is assumed to take place with concrete/stone cutting at various positions around site.
- Phase 4: construction and fit out of buildings, and installation of utilities (duration approximately six months) – construction of prefabricated modular buildings with an external cladding and fitted out, installation of lighting, CCTV towers, water and power supply cables, installation of bus shelters, barriers and signage, construction of the buildings. Pad foundations are expected to be used for structures built on-site, no requirement for piling has been identified.
- Phase 5: final surfacing (duration approximately three months) – construction of the final surface layer to parking areas, and circulation routes, and completion of permanent access (duration approximately three months) including delivery, application and rolling finish layer to car parking areas and access way, prior to the completion of the road markings and signage.

2.4.6 It is anticipated that parking spaces could be provided incrementally during construction as demand increases.

2.4.7 The indicative construction programme for the proposed development is provided in **Plate 2.1**.

Plate 2.1: Indicative construction sequence

	Q1	Q2	Q3	Q4	Q5	Q6	Q7
<b>Southern Park and Ride</b>							
Phase 1: Preparation works	■						
Phase 2: Earthworks and excavation	■	■					
Phase 3: Laying of materials for parking areas and internal circulation routes and construction of roundabout		■	■	■	■		
Phase 4: Installation of utilities and buildings				■	■	■	
Phase 5: Final surfacing						■	■

2.4.8 Early during construction, landscape bunds, swales and infiltration ponds would be used as appropriate to ensure that surface water run-off is contained within the site.

2.4.9 Soil stripped as part of the works in accordance with the **Outline Soils Management Plan** provided in **Volume 2, Chapter 17, Appendix 17C** of the **ES** and materials generated from the earthworks and excavation would be re-used in landscaping bund formation for the site, where suitable.

2.4.10 Working areas within the site would be secured with 1.8m high fencing. A temporary construction compound would be provided which would include a site management and security office, and materials and storage areas. Site parking and internal site access routes would be provided within the site boundary.

2.4.11 As construction would take place during normal working hours 07:00 to 19:00, Monday to Saturday, then some lighting may be required during the winter months, dependent upon what construction activities are taking place. The only lighting required at night would be for site security, unless 24-hour working is required on an *ad hoc* basis, for which East Suffolk Council would be notified in advance. Security lighting would be provided at the minimum light levels required and would be directed away from site boundaries to minimise nuisance to adjacent properties and other receptors.

b) **Estimated construction vehicles**

2.4.12 It is anticipated that a temporary construction access point would be provided to the site off the slip road until construction of the site access road is complete. All site traffic would be required to park within the site boundary to avoid any congestion in the surrounding areas.



**2.4.13** As detailed in the **Transport Assessment** (Doc Ref. 8.5), the proposed development is expected to generate up to 21 HGV (each way) movements per day during construction (42 HGV movements in total). Peaks would be related to specific activities, for example, road surfacing. There are also expected to be up to 118 car trips per day (each way; 236 movements in total) during construction of the proposed development. Therefore, it is expected that there would be a total of 139 vehicle trips each way (278 movements in total) per day during construction.

**2.4.14** The anticipated route of construction traffic would be from the A12, and then would follow the proposed access road alignment into the site.

**c) Road or public rights of way realignments, diversions or closures**

**2.4.15** During construction, roads and PRowS would remain open, or an alternative route provided, where reasonably practicable.

**2.4.16** Use of both bridleway E-288/008/0, and the adjacent private means of access would not be stopped, or curtailed during operation, but both would be temporarily extinguished to the south of the proposed access road, with vehicles and non-motorised users diverted via the proposed site access road.

**2.4.17** Though located partially within the site boundary, Footpath E-387/008/0 to the south-east of the site would not be diverted or altered by the proposed development.

**2.4.18** To enable the site access road to tie in with the slip road, temporary traffic measures would be required; this would comprise of a reduction in the width of the slip road for approximately two weeks, however, the slip road would remain open.

**d) Anticipated construction plant and equipment**

**2.4.19** The anticipated plant and equipment required for construction is set out in **Table 2.2**.

**Table 2.2: Anticipated plant and equipment for construction.**

Construction Phase	Plant/Equipment
Phase 1.	Chainsaws and brush-cutters as necessary for site clearance. 1 x 360 tracked excavator for site entrance works.
Phase 2.	2 x 360 tracked excavators. 2 x bulldozer. 32 x dump truck. 1 x vibratory roller.

Construction Phase	Plant/Equipment
Phase 3.	1 x pneumatic-tyred rough or all terrain crane. 2 x truck mounted concrete pump and boom arm. 1 x concrete mixer truck. 1 x compressor. 1 x concrete cutting (hand-held circular saw). 2 x electric bolter. 2 x diesel water pumps. 1 x diesel generator. Pneumatic hand tools. Compaction plant including vibratory rollers/plates.
Phase 4.	1 x tracked excavator. 1 x auger drill. 1 x flat-bed lorry. 1 x small crane.
Phase 5.	1 x road planer. 1 x motor grader. 1 x road roller. 1 x asphalt paver (and tipper lorry).

e) Construction workforce

2.4.20 The number of workers required to construct the proposed development would change during the course of the construction programme. Peaks would be related to specific activities, for example, road surfacing. It is estimated that the peak construction workforce would be approximately 60 persons on the site at any one time.

2.4.21 Security would be provided on-site during construction, to be staffed 24 hours a day, supported by CCTV along the security fencing and within the parking areas, which would be monitored from the on-site security facilities.

f) Indicative material quantities

2.4.22 The indicative materials and the quantities required for the proposed development can be found in **Table 2.3**.

**Table 2.3: Indicative material quantities.**

Material	Approximate Mass of Materials Required (tonnes).
Concrete	13,400
Gravel (sub-base, capping layer, drainage).	38,900

Material	Approximate Mass of Materials Required (tonnes).
Bitumen	21,950
Steel	10
Other (including fencing, lighting, CCTV, drainage goods).	3,050

2.4.23 It is not intended that any earthworks materials would be removed from the site.

g) Waste

2.4.24 Additional ground investigation would be required to confirm the waste to be generated at the detailed design stage. However, waste generated from the construction and earthworks activities of the proposed development is likely to include:

- vegetation;
- packaging, including wood pallets, plastics, cardboard, tins;
- plasterboard;
- rubble (broken bricks, blocks, tiles etc.);
- timber (excluding pallets);
- cement;
- insulation;
- metal;
- dry concrete products (blocks, slabs etc.);
- plaster products (excluding packaging);
- ceramic materials; and
- hazardous waste (remedial wastes, paint cans, oil/lubricants etc.).

2.4.25 Earthworks would be designed to maximise cut and fill balance in order to prevent material being sent off-site. Where appropriate, topsoil and subsoil would be stored on-site in landscape bunds for reuse during the removal and reinstatement works to return the site to agricultural use, in accordance with the **Outline Soils Management Plan** provided in **Volume 2, Chapter 17**,

**Appendix 17C** of the **ES**. Furthermore, contractors would be required to investigate opportunities to minimise and reduce waste generation.

2.4.26 Any inert and non-hazardous waste material that cannot be reused on-site would be removed by licensed waste carriers and sent for reuse, recycling or recovery or for disposal at appropriately licenced facilities (these are expected to be inert waste landfill sites) in accordance with the Waste Hierarchy, as defined in the European Union Waste Framework Directive (2008/98/EC). However, works would be carried out in such a way that, as far as is reasonably practicable, the amount of waste to be disposed at landfill is minimised.

2.4.27 It is estimated that approximately 2,379 tonnes (t) of construction waste would be generated, comprised of approximately 1,784t of inert waste, 476t of non-hazardous waste, and 119t of hazardous waste. Refer to the **Waste Management Strategy**, provided in **Volume 2, Chapter 8, Appendix 8A** of the **ES**, for further details on the types of wastes likely to be generated, the assumptions used for calculating waste quantities and the proposed measures for waste management.

#### h) Construction environmental and traffic management

2.4.28 A **Code of Construction Practice (CoCP)** (Doc Ref. 8.11) is included in the DCO application for the Sizewell C Project, which sets out the measures and controls that SZC Co. will require its contractors to adopt during both the construction and the removal and reinstatement of the proposed development. In summary, the **CoCP** (Doc Ref. 8.11) sets out the following:

- General construction environmental management arrangements, including details of the environmental management system.
- How construction environmental management arrangements will be implemented, reviewed and monitored.
- Community and stakeholder engagement arrangements that will be implemented during the construction period.
- General measures relating to topics such as training and competence, construction consents, workforce code of conduct, working hours and construction site layout.
- Measures relating to waste management and resource use, land quality, ecology, landscape, cultural heritage, noise and vibration, air quality, water environment, traffic and transport, amenity and recreation, carbon emissions, and emergency arrangements.



- Any site-specific controls to be applied at any of the Sizewell C Project sites.

2.4.29 The management measures and controls included in the **CoCP** (Doc Ref. 8.11) have been identified through the EIA process and will minimise impacts on the environment and human receptors, as far as reasonably practicable.

2.4.30 In addition to the **CoCP** (Doc Ref. 8.11), the arrangements for the management of construction traffic and workforce travel are set out in the **Construction Traffic Management Plan (CTMP)** (Doc Ref. 8.7) and **Construction Worker Travel Plan (CWTP)** (Doc Ref. 8.8). These documents include a series of measures to reduce the impact of construction vehicle traffic upon the highway network and for the sustainable travel of construction workforce to the Sizewell C Project sites.

2.4.31 The **CoCP** is secured by a requirement in Schedule 2 of the **Draft DCO** (Doc Ref. 3.1) and the appointed contractors will be required to undertake the construction works in accordance with the arrangements set out within the **CoCP** (Doc Ref. 8.11). The **draft Section 106 Heads of Terms** appended to the **Planning Statement** (Doc Ref, 8.4) then secures the **CTMP** (Doc Ref. 8.7) and **CWTP** (Doc Ref. 8.8). Any work undertaken by a contractor would be reviewed and approved by relevant SZC Co. personnel prior to the work commencing.

2.4.32 In addition, there may be a need to apply for additional permits, consents or licences prior to and during the construction works (such as Land Drainage Consents, environmental permits or protected species licences, if required). As the programme of works and design are progressed, these permissions will be identified and scheduled in a timely manner to enable determination by the appropriate regulatory body. Any requirements of a granted permit, consent or licence will be provided to contractors undertaking the work to ensure compliance with those requirements.

## 2.5 Description of operation

2.5.1 This section sets out the anticipated operation of the proposed development.

### a) Operation overview

2.5.2 The proposed development has been located to intercept workforce traffic movements from locations south and west of the A12 in order to maximise transportation of the workforce by bus to the Sizewell C main development site and reduce car trips on the local highway network.

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- 2.5.3 The proposed development would only be required to support the construction of the Sizewell C main development site, which is expected to last 9–12 years.
- 2.5.4 The proposed development would operate between 05:00 to 01:00 seven days a week.
- b) **Security and other operational personnel**
- 2.5.5 Security would be provided on-site 24 hours a day, supported by CCTV which would be monitored from the proposed security facilities.
- 2.5.6 In terms of full time equivalent jobs, a total of around six security jobs and eight other jobs (likely to include maintenance and service support such as parking attendants) would be estimated to be supported at peak between the northern and southern park and ride sites and the freight management facility (FMF).
- 2.5.7 Shift patterns mean that the estimated headcount is likely to be higher for some roles. Staff would work on a shift basis and, assuming two shifts per role for security staff, the total headcount split between the northern park and ride, southern park and ride and the FMF would be approximately 20 people.
- c) **Vehicle arrivals and departures**
- 2.5.8 Whilst the proposed development would operate seven days a week, the use would vary throughout the construction of Sizewell C main development site and according to shift patterns. Typically, there would be fewer shifts on Fridays and weekends. The proposed development would not be operational between 01:00 and 05:00, during which the site will be closed, but security staff will remain on-site.
- 2.5.9 Users would either enter the site via the pedestrian access point to the south or via the main entrance by car before parking in the proposed parking areas. Once on-site, users would walk via pedestrian walkways to reach the buildings on-site, and pass through a secure controlled area for workers to be screened before taking the next available bus to the Sizewell C main development site.

2.5.10 The peak construction year for the Sizewell C Project is anticipated to be in 2028. At this time the construction workforce would be at its highest, and thus use of the proposed development would also be at its peak. Either side of 2028, use would vary according to the location of the construction workforce and demand. The design for the site has been undertaken on the basis of up to 1,250 cars and up to 80 motorcycles parking at the facility.

2.5.11 In addition to the buses travelling to and from the Sizewell C main development site, there would also be arrival and departure vehicle movements associated with the park and ride staff and deliveries to the postal consolidation building. There would be approximately seven operational staff per shift at the proposed development. Assuming there are three shifts per day, there would be in approximately 42 additional vehicular trips to and from the site (not including the movements to/from the site by the Sizewell C main construction workforce).

d) **Postal consolidation building**

2.5.12 A postal consolidation building would be located in the western part of the site. The postal consolidation building would handle and process postal deliveries for the Sizewell C main development site. On receipt at the postal consolidation building, all mail and courier packages would be checked, sorted and consolidated, and would be recorded from point of delivery to the site. Outgoing mail would be collected from the Sizewell C main development site for postal or courier services. The postal consolidation building would typically operate Monday to Saturday.

2.5.13 As detailed in the **Transport Assessment** (Doc Ref. 8.5), it is expected that during Sizewell C peak construction there would be 88 light goods vehicle (LGV) arrivals per day at the postal consolidation building, and 88 LGV departures. Consolidation of post would result in just two LGVs travelling each way per day from the postal consolidation building to the Sizewell C main development site.

e) **Traffic incident management area**

2.5.14 A TIMA would be located in the northern part of the site. If there is an incident within the Sizewell C main development site or external to the Sizewell C main development site on the local road network which requires construction-related vehicles to be held or diverted, the Wickham Market TIMA could be utilised to manage vehicles, and remove them from the public road network while the incident is being resolved. The TIMA would only be used for the parking of HGVs when required due to an incident. For the majority of the time, it would be unused with no HGVs parked in this area.

## f) Frequency of bus services

2.5.15 The frequency and timing of park and ride buses would depend on the working patterns adopted during construction of the Sizewell C main development site, and the number of workers to be moved during the shift changeover periods. More frequent services would operate during staff changeover and shift start/end periods. It is anticipated that there would be three to nine buses from the proposed development per hour during shift changeover period, and an hourly service outside shift changeover periods.

2.5.16 There would be a maximum of 100 daily bus arrivals and 100 daily bus departures from the proposed development to the Sizewell C main development site. These buses would use the A12, two village bypass and Sizewell link road once operational – see **Volumes 5** and **6** of the **ES** respectively – to travel to and from the Sizewell C main development site.

## g) Site maintenance

2.5.17 It is anticipated that prior to operation, responsibility for the maintenance of the site and buildings would be handed over to a facilities management organisation, who would arrange appropriate management and contracts to ensure that the site, fabric and structure of buildings (and other items including fencing, landscaping and lighting) are properly maintained and repaired.

## h) Waste

2.5.18 Waste would be generated during the operation of the proposed development, including waste arising from maintenance activities, site security, administration and welfare facilities. These activities could lead to generation of the following types of waste:

- packaging materials for goods entering the site, e.g. paper, card, glass, plastic and metal;
- biodegradable food waste from the welfare facilities;
- hazardous wastes, e.g. some paints, fuel and gas bottles;
- building maintenance waste, e.g. timber, plasterboard, insulation, paint tins and metals;
- green waste from landscape maintenance operations;
- hygiene wastes; and
- municipal waste and litter from the facility users.

- 2.5.19 The total weekly waste generation expected from the operation of the proposed development is 11m<sup>3</sup>.
- 2.5.20 Bins for waste collection would be located in appropriate areas, both internally and externally, and all waste would be processed and disposed of by a specialist and licenced waste contractor. The collection frequency will be determined by the appointed Facilities Manager and the collection contractor.
- 2.5.21 The assumptions used to estimate the required waste storage provision for the amenity and welfare building, security building, security booth and postal consolidation building are set out within the **Waste Management Strategy** provided in **Volume 2, Chapter 8, Appendix 8A** of the **ES**.

## 2.6 Removal and reinstatement

- 2.6.1 Once the need for the proposed development has ceased, the site access, buildings and associated infrastructure would be removed in accordance with a demolition and restoration plan, which would maximise the potential for re-use of building, modules and materials. Temporary planting within the site would also need to be removed; hedgerows along the access route would need to be removed and re-planted along the original hedgerow lines.
- 2.6.2 When the site has been cleared, the area would be returned to agricultural use. The A12 highway works to reduce the northbound carriageway to one lane, would be retained. We anticipate that SCC would retain the B1078 speed limit reduction on the bridge across the A12, if agreed and adopted during construction and operation of the proposed development.
- 2.6.3 Phased removal and reinstatement of the site may be possible as worker numbers at the Sizewell C main development site decrease, but this would not be determined until the facility is operational and is still to be confirmed. It is expected that removal and reinstatement would take place within the final 24 months of the Sizewell C construction programme, as shown in the Indicative Phasing Schedule in the **Implementation Plan** appended to the **Planning Statement** (Doc Ref 8.4). It is anticipated that construction worker numbers and construction vehicle movements during removal and reinstatement would be similar to those reported for construction.
- 2.6.4 It is anticipated that removal and site reinstatement would follow a programme broadly the reverse of construction. Key activities would include but are not limited to:
- formation of demolition site compound;



- demolition plant mobilisation and ceasing of operational traffic movements and closure of facilities;
- removal of buildings, structures and services;
- breaking up of concrete and surfacing;
- restoration of land; and
- management of waste and other materials.

2.6.5 The anticipated plant and equipment required for the removal and reinstatement works is set out in **Table 2.4**.

**Table 2.4: Anticipated plant and equipment for the removal and reinstatement works.**

Removal and Reinstatement Works.	Plant/Equipment.
Dismantle and removal of structures.	2 x tracked excavator. 1 x flat-bed lorry. 1 x small crane. 1 x breaker mounted on wheeled backhoe.
Landscape reinstatement.	2 x bulldozer. 2 x dump truck. 1 x vibratory roller.

2.6.6 It is estimated that 5,800t of post-operational waste would be generated, comprised of approximately 4,600t of inert waste, 1,150t of non-hazardous waste and 50t of hazardous waste. This would comprise of the same material types as used during construction. Where possible, the recovered materials would be sold directly to the local market for reuse or, alternatively, sent for reuse, recycling or recovery or for disposal at appropriately licenced waste management facilities. Refer to the **Waste Management Strategy**, provided in **Volume 2, Chapter 8, Appendix 8A** of the **ES**, for further details on the waste types, quantities and management measures during removal and reinstatement.

## References

- 2.1 PINS Advice Note Nine: Rochdale Envelope, July 2018. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2013/05/Advice-note-9.-Rochdale-envelope-web.pdf>