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## CHAPTER 4

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## 4.0 SCHEME DESCRIPTION AND CONSTRUCTION METHODS

### 4.1 Introduction

4.1.1 This chapter of the ES provides a description of the layout and design of the various components of the Proposed Development. A description of the construction methods, including the measures proposed to mitigate potential construction phase effects is also provided.

4.1.2 This section of the ES, should be read in conjunction with a series of illustrative Figures as follows:

- Figure 4.1 - Parameters Plan;
- Figure 1.2 – Scheme Masterplan;
- Figure 1.3 – MSA Layout; and
- Figure 1.4a-b - Illustrative Sections.

4.1.3 Table 4.1 below provides a schedule which lists the proposed buildings / structures on the Site and the main areas and heights associated with each. As the proposals are in outline, these details are shown as ranges. The Illustrative Masterplan depicts the Proposed Development at the upper end of the range, and as such, represents a worst case scenario in the context of the environmental assessment.

**Table 4.1 Kirby Hill MSA Development Parameters**

| Development Zone                  | Footprint (m <sup>2</sup> ) |             | Building Area GEA (m <sup>2</sup> ) |             | Covered Area Around Building (m <sup>2</sup> ) |             | Max Height (m) |       | Max Height AOD (m) |       |
|-----------------------------------|-----------------------------|-------------|-------------------------------------|-------------|--|-------------|----------------|-------|--------------------|-------|
|                                   | upper                       | lower       | upper                               | lower       | upper  | lower       | upper          | lower | upper              | lower |
| <b>Main Amenity Building</b>      | 2500                        | 2100        | 4800                                | 2500        | 5000   | 3200        | 13             | 9     | 51                 | 44    |
| <b>FFS Forecourt*</b>             | n/a                         | n/a         | n/a                                 | n/a         | 2950*  | 2350*       | 10             | 6     | 46                 | 41    |
| <b>HGV FFS Forecourt (Canopy)</b> | n/a                         | n/a         | n/a                                 | n/a         | 715  | 565         | 8              | 6     | 50                 | 48    |
| <b>Drive-Through Coffee Shop</b>  | 305                         | 285         | 305                                 | 285         | 500  | 200         | 6.5            | 5.8   | 48                 | 46    |
| <b>TOTAL</b>                      | <b>2805</b>                 | <b>2385</b> | <b>5105</b>                         | <b>2785</b> | <b>6215</b>                                    | <b>3965</b> |                |       |                    |       |

\* sales area included within Amenity Building canopy included as part of overall Amenity Building canopy

4.1.4 Finally, the Proposed Development is illustrated and described within the Design and Access Statement also submitted in support of the Vale of York MSA application. Additional detail is provided in respect of potential construction

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materials and finishes, and the character of the design. Accordingly, this scheme description should be read in conjunction with the Design and Access Statement.

4.1.5 The aforementioned information, in combination with the details provided in this scheme description, provide sufficient information to allow for the likely significant environmental effects of the Proposed Development to be identified for the purposes of this ES.

4.1.6 The subsequent sub-sections provide a more detailed description of the main development components, together with an outline description of the anticipated construction works and processes.

## **4.2 Overview of the Development**

4.2.1 The Masterplan (Figure 1.2 and 1.3) illustrates the overall MSA proposal, which would comprise of the following main elements:

- an Amenity Building containing hot and cold food outlets, a shop, lavatories, shower and seating / resting areas. This building would have a gross external floor area of up to 4,800m<sup>2</sup>; and would sit under an innovatively designed, sweeping green roof which would assist with assimilating the scheme into its setting;
- a Fuel Filling Station with 10 islands (20 filling points) for cars, vans and small commercial vehicles. This would be located immediately to the east of the Amenity Building, underneath the same green roof;
- a separate stand-alone Fuel Filling Station with 5 islands (6 filling points) for HGVs and coaches;
- a separate stand-alone Drive through Coffee Shop;
- parking space provision for 364 cars (including spaces for disabled users), 90 HGVs, 18 coaches, 11 caravans, and 11 motorcycles. The parking provision would include electric vehicle charging stations. All parking would be free of charge for a minimum of 2 hours and meets the relevant standards for an MSA in this location;
- a dedicated means of access from the A1(M). This would comprise new entry and exit slip roads for northbound and southbound traffic. The new slip roads would lead to a new grade separated dumbbell junction, which would comprise two roundabouts on the eastern and western side of the A1(M) connected by an overbridge spanning the A1(M);

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- a dedicated mean of access from the B6265 that would be only used for staff and deliveries to the amenity building and coffee shop. The entrance would be controlled by an access barrier and there would be no access to the public;
  - realignment of c.650m of the A168 to the north of the roundabout junction with the B6265 to allow the construction of the southbound access and entry and exit slip roads to the MSA;
  - two Abnormal Load Bays, one on the northbound entry slip road to the MSA and one on the southbound exit slip road from the MSA. Both bays would be linked to the MSA via pedestrian footways that would follow the proposed MSA access roads;
  - surface water drainage infrastructure, forming part of a site-wide sustainable drainage system;
  - An extensive on-site hard and soft landscape scheme, together with earthworks across the site and the provision of screen mounding. The landscape areas would incorporate:
    - A Children's Play Area;
    - Dog Exercise Area; and
    - Driver Stretch / Exercise Area.
  - other associated infrastructure including fencing, lighting and signage etc.

### ***Design Philosophy***

- 4.2.2 The development concept and design has been formulated to take account of a number of factors, including the topography of the Site and various other constraints and opportunities including the health and safety of vehicle passengers and pedestrians.
- 4.2.3 One of the principal design drivers has been to mitigate the landscape and visual concerns raised in relation to the previous applications at the Site. The process of developing the illustrative Masterplan is explained in detail within the Design and Access Statement. Accordingly, the design philosophy is not repeated in full within the ES, but is summarised below.
- 4.2.4 The Proposed Development has sought to present a modern, efficient and exemplary MSA which is highly respectful of its open countryside setting, seeking to minimise the impact of the scheme on the local landscape both spatially and visually. The design development has and will continue to achieve this in the following ways:

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- Detailed appraisal and analysis of the Site's physical characteristics and interaction with nearby visual receptors;
  - Detailed understanding of the Site's context and local landscape character;
  - Development of the client brief and user needs;
  - Detailed understanding of the national, regional and local planning context; and
  - Interrogation of previous decisions and points of concerns arising from previous applications at the Site.

4.2.5 A critical analysis of the previous MSA applications at the Site highlighted a series of fundamental considerations which have driven the current proposals. The conclusion of the Inspector at the Public Inquiry held in 2011 in respect to landscape and visual impacts noted that:

*“The site is not covered by any formal landscape quality designation, but it has been assessed in the district's landscape character appraisal. It is a uniform large-scale agricultural landscape that would not easily mitigate the harmful effects of the large scale MSA. The development would be seen from closer viewpoints, mostly in the context of introduced large scale woodland planting and a 450m long mound up to 9m high that would mostly surround the development. Both would be alien features in the countryside here that would significantly harm the character of the surrounding open landscape.”*

4.2.6 He went on to identify potential harm to residential properties in Church Lane, and residents near Skelton Windmill.

4.2.7 In relation to Cultural Heritage he identified harm, albeit limited, to the settings of the Grade I listed All Saints' Church in Kirby Hill and to the Grade II listed Skelton Windmill.

4.2.8 In summary, it was clear that the current proposals must minimise harm to the character of the countryside in the area, reduce visual impacts on nearby residential receptors and reduce potential effects on the settings of nearby heritage assets.

4.2.9 With a focus on limiting the scheme's visual impact on the local landscape character and nearby receptors, the design has sought to blend the MSA into the surrounding rural landscape, minimising external views of the built form. A series of

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layout options were tested and interrogated in order to establish the most compact and efficient site layout.

- 4.2.10 Primary elements such as structure and roof seek to play an integral role in blending the built forms within the landscape, this would be further enhanced by the choice of materials used as the scheme develops at the detailed design stage. Careful manipulation of the landform has also been used to further reduce the visual effects of the scheme, this includes setting levels for parking areas to reduce visibility of vehicles using the service area. Where mounding is proposed to screen elements of the scheme this has been designed to reflect the local topography and to not detract from the local landscape character.
- 4.2.11 In these regards the Proposed Development has sought to resolve many of the key issues and concerns which resulted from previous proposals at the Site.

### **4.3 Proposed Buildings / Structures**

#### ***Amenity Building***

- 4.3.1 The Amenity Building would comprise a single building with a Fuel Filling Station (FFS) for cars, vans and small commercial vehicles located immediately to the east of the amenity building. The entirety of the Amenity Building and FFS would be covered by an over-sailing, curved green roof that would descend to ground level at the western end.
- 4.3.2 The green roof has been designed to screen views of the building from the west and to help integrate the largest building within the MSA into the surrounding landscape.
- 4.3.3 The Amenity Building has been located in the lowest area of the Site enabling the rising land to the west and the existing road embankment of the B6265 to provide screening to the building.
- 4.3.4 The main public access to the Amenity Building would be provided on the northern elevation with secondary public access provided on the eastern elevation adjacent to the FFS. Access for deliveries and servicing would be to the rear, on the southern elevation, along a dedicated service road.
- 4.3.5 To the north of the Amenity Building an external seating area and children's play area would be provided.

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4.3.6 The Amenity building would contain a range of uses over a ground floor and mezzanine level. The ground floor would include:

- A range of hot and cold food and drink offers;
- A shop;
- Public lavatories and showers;
- Pay phones;
- Seating / resting areas;
- 24 hour HGV drivers lounge;
- A lift and stairs; and
- Back of house provision including: staff welfare facilities, a room for the police, waste handling, stores, plant rooms, a service lift and unloading area.

4.3.7 The mezzanine level / first floor would include:

- An exit point onto an external terrace;
- Further hot and cold food and drink offers;
- Seating areas including a business lounge;
- Public lavatories; and
- Further back of house provision.

4.3.8 The integrated FFS would have with 10 islands (20 filling points) for cars, vans and small commercial vehicles. The surface water drainage system for the FFS would include a fuel interceptor system designed specifically for fuel forecourt areas.

#### ***Drive through Coffee Shop***

4.3.9 The Drive through Coffee Shop would be located at the northern extent of the main MSA area, close to the entry / exit point for cars entering the MSA. The unit would comprise of a single storey building, with a green roof.

#### ***HGV Coach Fuel Filling Station***

4.3.10 There would be a separate stand-alone FFS for HGVs and coaches. This would have 5 islands (6 filling points) and a canopy comprising a green roof. It would not require a kiosk / pay booth and fuel would only be vended via automated card payment. This FFS would be located adjacent to the HGV and coach parking areas towards the north western part of the Site. The surface water drainage

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system for the FFS would include a fuel interceptor system designed specifically for fuel forecourt areas.

#### **4.4 Access and Parking**

##### ***Site Access and Egress***

- 4.4.1 The MSA would be accessed via a new grade separated junction dedicated for use by traffic accessing the MSA. New entry and exit slip lanes to/from the A1(M) would lead to a 'dumb-bell' junction arrangement elevated above the level of the A1(M) carriageway. The dumb-bell junction would comprise two roundabouts, one on either side of the A1(M), connected by an overbridge above the motorway.
- 4.4.2 The bridge would be set at a level which would provide the same vertical clearance as the existing bridge over the B6265. The deck of the new overbridge would be set at circa 45.66m above ordnance datum.
- 4.4.3 Vehicles accessing the MSA would exit the A1(M) via the dumb-bell junction and proceed to a roundabout. Cars (including those towing caravans) would take the first exit towards the main car parking area and designated caravan parking area. Vehicles can access the FFS before or after having parked up in the main car park.
- 4.4.4 HGVs and coaches would take the second exit and proceed to the respective designed parking areas located along the western boundary of the Site. HGVs would drive along the western side of the coach parking area and enter the HGV parking area from the south. HGVs and coaches would enter the refuelling station on the way into the parking area.
- 4.4.5 Vehicles would exit the MSA via the dumb-bell junction described above.
- 4.4.6 There would be a second access to the MSA from the B6525. This would only be used by staff and service vehicles accessing the Main Amenity Building and Drive Through Coffee Shop. Emergency vehicles would also be able to use the access. The access would be controlled by a barrier, preventing access by the public.

##### ***Vehicle Parking***

- 4.4.7 The MSA vehicle parking provision accords with the requirements of Schedule 1 of DfT Circular 02/2013. The parking levels have also been agreed with Highways England (as per correspondence appended to the Transport Assessment) and would comprise:



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- 364 car parking spaces (including 18 spaces for disabled users and appropriate electric car charging provision);
  - 90 HGV spaces;
  - 2 abnormal load HGV spaces that would also act as Police Enforcement Areas;
  - 18 coach spaces;
  - 11 caravan spaces (including 2 spaces for disabled users);
  - 11 motorcycle spaces.

4.4.8 In addition to the above, the Proposed Development also includes provision for cycle spaces for staff use.

#### **4.5 Signage and Advertising**

4.5.1 All services accessed from the motorway must be signed for safety reasons and as such, all existing or future sites must meet the requirements for signing.

4.5.2 Annex B of DfT Circular 02/2013 'The Strategic Road Network and the Delivery of Sustainable Development' – sets out policy on the provision, standards and eligibility for signing of roadside facilities on the strategic road network. Table B1 of the Circular sets out the minimum requirements for the signing of roadside facilities from the strategic road network.

4.5.3 Vale of York MSA would meet all of the relevant eligibility criteria and minimum requirements; and as such would be eligible for signage off the A1(M). The signage would comply with the latest guidance on Traffic Signs Regulations and General Directions and any other guidance as may be issued by Highways England.

4.5.4 In addition to the signage on the strategic road network, a range of advertising / signage would also be required throughout the MSA. This would include, but not be limited to, totem pole style signage at the main entrance and signage on the Amenity Building, FFSs and Drive through Coffee Shop. The detailed design and positioning of this signage would be addressed through the Reserved Matters process.

#### **4.6 On-Site Landscape Proposals**

4.6.1 The Proposed Development will be supported by a comprehensive scheme of on-site hard and soft landscaping as shown on the Masterplan (Figure 1.2 and 1.3) The landscape areas would incorporate:

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- A Children's Play Zone;
  - Picnic Zone;
  - Dog Exercise Area; and
  - Driver Stretch / Exercise Area.

4.6.2 The landscaping scheme for the main MSA area proposes the retention of the majority of existing boundary vegetation, the planting of new hedgerows, including hedgerow trees, new native trees (both individually and in groups), new shrub planting, areas of species-rich grassland, and new waterbodies. The provision of green roofs on the proposed new buildings would provide further additional vegetation cover. Ornamental planting would be provided within and around the proposed car parking / HGV parking areas.

4.6.3 Significant areas of woodland planting have been avoided, responding to the local Landscape Character Area (LCA) guidelines which states that extensive large scale tree planting would be inappropriate in the LCA and that large scale blocks of woodland screening should be discouraged. Instead, the proposed landscape scheme has been designed to be in keeping with the LCA, with planting provided to soften the visual impact of the development and help it integrate into the surrounding landscape.

4.6.4 Earth arising from the construction of the MSA would be used to modify the landform of the Site. This includes the creation of a low screening bund along the western boundary of the Site, adjacent to the HGV parking area. In other areas of the Site earthworks would be shaped to provide shallow gradients, reflecting the nature of the surrounding topography.

4.6.5 A series of surface water attenuation lagoons, some containing permanent standing water, are proposed within the landscaped areas of the Site.

4.6.6 The precise details of the on-site landscape scheme, including external public space provision, structure planting, other vegetation and open space management, would be addressed as part of the Reserved Matters application. This would respect any mitigation measures stated in the findings of this ES, in particular those associated with visual screening and nature conservation.

4.6.7 In relation to the realignment of the A168 the landscaping proposals involve the provision of a hedgerow and wildflower grassland along the eastern side of the realigned road. Some woodland planting is proposed around the eastern

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roundabout of the proposed dumbbell junction and along the current alignment of the A168. This planting reflects the nature of existing woodland planting along the A1(M) and the A168. An attenuation pond would be provided adjacent to the realigned A169.

- 4.6.8 The agricultural fields between the realigned A168 and the A1(M) would be retained to reduce the effects of the scheme on the local agricultural resource. Where appropriate enhancement of the existing hedgerow would be undertaken to increase its integrity and biodiversity value.

## **4.7 Surface Water and Foul Drainage**

### ***Surface Water Drainage – Context***

- 4.7.1 The Application Site is greenfield in nature and contains no material areas of hard surfacing or any surface water features. At present surface water arising from precipitation infiltrates into the ground. There are no surface water drains or watercourse on or adjacent to the proposed main MSA area. A field drain, which does not discharge into a watercourse, is located to the east of the A1(M) along the eastern side of the agricultural track that runs north from Leeming Lane. The section of the A168 which would be realigned as part of the scheme is drained via by a piped highways drainage system.

### ***Surface Water Drainage Strategy***

- 4.7.2 The concept surface water drainage design is provided in the Drainage Strategy Report, which is included within the Flood Risk Assessment (Appendix 10.1 of the ES). The Proposed Development would result in the introduction of a number of impermeable and semi-permeable surfaces to facilitate vehicle movements and parking. Accordingly, a surface water drainage system would be constructed to serve the MSA based on the principles of Sustainable Drainage Systems (SuDS).
- 4.7.3 Surface water from the hard surfacing on the Site would discharge into a series of onsite infiltration basins. The drainage system would provide interception, collection, conveyance, storage and treatment of runoff. The scheme includes three green roofs and three infiltration basins. Petrol interceptors and oil separators are proposed as measures to mitigate potentially polluted water from flowing into the infiltration basins.

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- 4.7.4 The drainage demonstrates that surface water can be attenuated for all storm events up to and including the 1 in 100 year plus 30% climate change rainfall event.
- 4.7.5 It is proposed that the new alignment of the A168 is drained to an attenuation pond where the water would infiltrate into the ground. The proposed realigned road sits at a slightly lower level than the existing road, which could preclude drainage into the existing system. Further detailed design work would be undertaken in conjunction with NYHA which may identify that the realigned section of the A168 could drain into the existing highways drainage system. However, for the purposes of this assessment the drainage is assumed to flow into the proposed infiltration basin. The basin has been designed to accommodate all storm events up to and including the 1 in 100 year plus 30% climate change rainfall event.

### ***Foul Water Drainage***

- 4.7.6 The concept foul water drainage design is provided in the Drainage Strategy Report, which is included within the Flood Risk Assessment (Appendix 10.1 of the ES). The foul water strategy is to provide a pumped sewerage system that would connect to the existing 150mm diameter sewer located within Leeming Lane, 800m to the south east of the Site.
- 4.7.7 Correspondence with Yorkshire Water has confirmed that the flows from the MSA must not exceed six litres per second. As the proposed connection point lies to the east of the A1(M) it will be necessary for the connection to cross the A1(M). It is proposed that the pumping main would be installed by way of directional drilling, with an onward connection within or adjacent to the A168 to the point of connection within Leeming Lane.

## **4.8 Lighting**

- 4.8.1 The MSA would operate 24 hours per day and thus would require external lighting during the hours of darkness. In addition, the access and egress routes (on the public highway) would need to be illuminated to current highway standards i.e. the slip roads and grade separated dumbbell junction from the A1(M). The realigned A168 would also need to be lit on the approach to the roundabout, as is the case for the existing alignment of the A168.
- 4.8.2 A concept lighting design and an assessment of lighting levels, including light spill, is contained within the External Lighting Assessment report which forms Appendix

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4.1 to the ES. The indicative lighting scheme has been designed to ensure safe passage of users within the MSA, security and health and safety requirements are met, whilst seeking to minimise environmental effects of the lighting system.

4.8.3 It is proposed that the MSA Site lighting scheme would comprise columns up to 12m in height which would contain LED luminaires. The advantages of LEDs are their small dimensions, long lifespan, low failure rates and the lack of Infrared or Ultra Violet radiation. In addition, the light is more directional with low spill. LEDs provide considerable flexibility for mitigating the visual and ecological impacts of lighting, as composite bundles of LED lights within a lamp can be switched off to direct light where it is needed.

4.8.4 The Lighting Assessment report demonstrates the lighting scheme would limit the upward light (sky glow) ratio to 2.5% of the complete external lighting installation i.e. a level compatible with a rural setting as defined by the Institute of Lighting Professionals. In addition there would be negligible lateral light spill beyond the MSA Site boundaries. Finally, given there is virtually no visibility of the ground level surfaces (the principal reflective surface) within the MSA, from out with the Site, visual intrusion arising from the lighting would be absolutely minimal.

## **4.9 Utilities**

4.9.1 The MSA would require connection to a number of utilities. Potential connections include sewer, water and telecommunications. In relation to foul water sewer connections, the proposed route from the Site to local network is described in Section 4.7 above. Correspondence with Yorkshire Water (included in Appendix 10.1) confirms that there is adequate capacity to meet the needs of the MSA.

4.9.2 A water main and BT connection is available within the B6265. In relation to the water main, Yorkshire Water have confirmed that water can be supplied to the Site from the 3 Inch main within the B6265 without the need for any mains reinforcements or mains diversions (refer to Appendix 4.3).

## **4.10 Fencing and Security**

4.10.1 The Site boundaries would be secured with an appropriate fencing system to prevent unauthorised access into the MSA. This is likely to comprise a 'weldmesh' type system along the southern, western and northern boundaries. The fencing along the western and northern boundary would be positioned on the MSA side of the proposed hedgerow to screen views of the fence. The precise details of the

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fencing arrangement would be determined at the Reserved Matters stage, following consultation with HBC officers and the local Police Architectural Liaison officer.

4.10.2 A Closed Circuit Television (CCTV) system would be installed, maintained and operated in accordance with British Standard 7958:2005 - CCTV Management and Operation [Code of Practice]. CCTV cameras would be positioned to give clear surveillance of the public accessible areas, building entrances and car/HGV parking areas. CCTV cameras would be mounted on lighting columns and building walls as appropriate to ensure that comprehensive coverage is achieved.

4.10.3 As 24 hour public facility it is important that security measures are considered in detail and at an early stage, to ensure that every means has been taken to make the design secure from crime. The detailed design would incorporate all necessary security measures, taking advice from all relevant guidance and policies including: Secured By Design standards; National Planning Policy Framework Chapter 8. Promoting Healthy Communities, paragraph 69; Planning Practice Guidance: The importance of good design.

#### **4.11 Waste Management**

4.11.1 Both the construction and operational phases of the Proposed Development have the potential to generate a range of waste materials. Correct management of wastes is therefore a key development objective. The Applicant recognises that there are legal, environmental and social requirements concerning the generation, collection, storage and disposal of waste. In considering these, the Applicant is aware of the need to comply with the relevant legal and regulatory framework.

4.11.2 The Applicant also recognises that a comprehensive waste management strategy adds value to the overall business and is in its self a sustainable operation. The details of Applegreen's Waste Management Strategy for the proposed Vale of York MSA development are set out in Waste Audit document, contained as Appendix 4.2. This sets out measures for the control of waste during the construction and operational phases of the Proposed Development.

4.11.3 For the Construction phase, the Waste Audit report:

- Describes the principles to be employed during the final design and procurement phase that aim to reduce waste and ensure that such wastes that do arise can be managed as sustainably as possible;

- 
- Outlines best practice that should be adopted by the contractor(s); and
  - Sets out the principles for minimising and managing any excess material arising from the main earthworks stage, which is also discussed briefly under the construction phase description provided subsequently in this chapter.

4.11.4 In terms of the operation phase, the Waste Audit report:

- Identifies the types of waste typically generated at an MSA;
- Sets out the principles of the Waste Management Strategy based upon adherence to the waste hierarchy, whilst minimising risk and keeping the Strategy under review;
- Identifies specific roles and responsibilities of the off and on-site personnel;
- Provides a categorisation of the wastes that are likely to be encountered;
- Outlines waste minimisation techniques;
- Provides details of waste collection and segregation areas;
- Describes the principle methods of waste management; and
- Outlines details for staff training and review.

## **4.12 Employment and Operating Hours**

4.12.1 In accordance with the requirements of DfT Circular 02/2013 the MSA would be open 24 hours a day, for 365 days of the year and, when operational, it would employ 300 staff. The occupational mix would be as follows:

- Managers and Senior Officials: 7;
- Professional Occupations: 66;
- Associate Professional and Technical Occupations: 3;
- Administrative and Secretarial Occupations: 8; and
- Sales and Customer Service Occupations: 216.

4.12.2 Working hours would be dependent on the staff position / role, however, there would be a significant number of employees operating on a 3 shift system. Shift changes would be timed to avoid peak hours on the local road network.

4.12.3 Full details of the operational employment and other socio-economic benefits of the Proposed Development are set out in Chapter 12.0 of the ES.

## **4.13 Construction Phase**

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- 4.13.1 Construction working hours would be 07.00 hours to 19.00 hours Monday to Friday and 07.00 hours to 13.00 hours on Saturday. There would be no working outside of these hours or on Sundays or Bank Holidays without prior agreement of HBC, as the local planning authority.
- 4.13.2 In order to minimise disruption to traffic on the motorway, night time working is likely to be required in respect of constructing the slip roads into the site and to construct the new overbridge.
- 4.13.3 It is anticipated that there would be two site compounds. Site Compound 1 would be located on the western side of the A1(M) within the footprint of the Site. Site Compound 2 would be located on the eastern side of the A1(M) and would most likely be located within the agricultural land that lies between the existing A168 and the proposed realigned A168.
- 4.13.4 The site compounds would be established under Part 4 Class A: Temporary Buildings and Uses of The Town and Country Planning (General Permitted Development) (England) Order 2015 and as a consequence do not require planning permission in their own right.
- 4.13.5 The overall construction period is anticipated to last up to 12 months and the main anticipated construction sequence is described below. Details may vary following appointment of the principal contractor. However, all construction phase activity would be regulated via the Construction Environmental Management Plan and Construction Traffic Management Plan described subsequently. These documents would be the subject of pre-commencement planning conditions and thus subject to the approval of HBC.
- Site Compound 1 would be established and earth moving plant brought to the Site via the existing access from the B6265. Site Compound 1 is likely to be located in the western part of the proposed MSA car / caravan parking area.
  - The first stage of construction would be to form the northbound slip roads. Construction traffic for these works would gain access from the B6265. There is likely to be some excavation undertaken within the main MSA area during this period to enable construction of the western dumbbell junction and embanked road leading from the junction into the main MSA area. Traffic management on the A1(M) would be required during these works.



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- Once the northbound slip roads are completed construction traffic could access the MSA site from the motorway, subject to Highways England approval. This first stage of construction is likely to take up to six months.
  - The bulk of the MSA earthworks would be undertaken once the north bound slip roads have been completed. This would involve lowering of areas of the Site to create the building platform for the main Amenity Building, the carpark and the HGV parking area. Some of the excavated material would be retained onsite for use in the landscaping proposals. The remainder would be exported. It is anticipated that the main earthworks phase would be completed by month 4, the peak in HGV construction phase traffic is likely to occur during these first four months
  - Construction of the main Amenity Building and linked FFS would commence once the earthworks in this area of the Site was completed, together with the HGV FFS and drive through coffee shop.
  - Thereafter a standard construction procedure would be followed, with building shells completed, followed by fit out and development of the external works including: internal roads and vehicle parking areas; permanent drainage infrastructure; and the installation of services, lighting, permanent fencing and signage etc.
  - Site Compound 2 would be established on the eastern side of the A1(M) early in the construction programme. It is likely to be located in the agricultural field to the east of the A168 and accessed via the existing farm access on Leeming Lane. The A168 realignment would be constructed and opened to traffic before the existing A168 is closed to enable construction of the overbridge, the eastern side dumbbell roundabout and the southbound slip roads.
  - The construction sequence of the overbridge would involve in-situ casting of concrete abutment structures and a pier within the central reservation of the A1(M). Once completed a precast bridge deck, likely to be fabricated within a compound to the immediate east of the A1(M), would be lifted into place. The lifting of the bridge deck would require a night-time/weekend closure of the motorway. Traffic management would be required to facilitate the construction of the bridge abutments and central pier.
  - Finally landscaping works would be carried out on completion of all construction activity.

4.13.6 At the peak of the construction period the Proposed Development is anticipated to require circa 200 on-site construction related workers. Table 4.2 below shows the typical profile of employment at the site during the construction phase, together with forecast HGV and LGV / car numbers:

**Table 4.2 Typical Construction Phase Employment Profile and Vehicle Numbers**

| Month                              | 1  | 2  | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  |
|------------------------------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Workers (daily average)</b>     | 50 | 50 | 100 | 100 | 150 | 150 | 150 | 200 | 200 | 200 | 200 | 200 |
| <b>HGVs (daily average)</b>        | 48 | 48 | 250 | 250 | 25  | 20  | 20  | 10  | 10  | 10  | 10  | 10  |
| <b>LGVs / Cars (daily average)</b> | 25 | 25 | 50  | 50  | 75  | 75  | 75  | 100 | 100 | 100 | 100 | 100 |

4.13.7 Standard construction plant and machinery would be utilised during the construction phase, which is expected to include (but not be limited to) the following:

- Tracked excavators (excavation and loading);
- Articulated dump trucks;
- Wheeled backhoe loaders;
- Scrapers;
- HVG wagons;
- Mobile and fixed cranes; and
- Cement mixer trucks.

4.13.8 As set out in the aforementioned Waste Audit document the objective of the earthworks would be to minimise the export of excavated soils with as much of the material as possible (including topsoil) being retained and re-used within the Site. However, owing to the key requirement to minimise landscape and visual effects of the Proposed Development, which has resulted in the lowering of levels on the Site and ensuring earthworks fit the local landscape character, it would not be possible to achieve a cut and fill balance across the Site.

4.13.9 As a consequence, there would be a need for excavated material to be removed from the Site. In addition, there would be a need to import bulk fill material (i.e. aggregates) for engineering purposes. The Waste Audit provides further details of the earthworks balance together with other measures for the minimisation and management of waste through the construction phase.

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4.13.10 With regard to the export of excess excavated material, it must be recognised that the application has been made in outline, thus it is not possible to provide a precise cut / fill balance calculation at this juncture. However, based on existing site levels and the illustrative Masterplan design, it has been calculated that there could be circa 68,000m<sup>3</sup> of excess material.

4.13.11 Owing to the undeveloped nature of the Site, the excavated material is likely to be defined, in accordance with the CL:AIRE Definition of Waste: Development Industry Code of Practice (2011), as 'Clean'. Clean for the purpose of this document is defined as "*devoid of anthropogenic contamination to a degree or level that is considered harmful to living organisms*". "*Clean naturally occurring soil and mineral materials*" includes:

- Soil, both top soil and sub-soil;
- Parent material such as underlying rock from which constituent parts make up part of the soil;
- Clays, silts, sands and gravels;
- Underlying geology; and
- Made Ground consisting of the above materials only, e.g. embankment which is to be removed and is suitable for use without any processing.

4.13.12 In order to be classified as 'Clean' such materials must be sourced from either greenfield sites not subject to past contaminative use (for example, from chemical spillage, on-farm landfills / carcass burial), or from brownfield sites where the natural soils have been extensively characterised and proven to be clean. In the case of the Vale of York MSA site, the former applies.

4.13.13 In accordance with the CL:AIRE Code of Practice clean naturally occurring soils and mineral materials can be directly transferred from one site to another development site for use, without the need for waste legislation being applied (i.e. the receiving development site does not require an Environmental Permit or Waste Exemption). CL:AIRE maintains a Register of Materials which covers active development sites throughout the UK. These are classed as either 'Donor Sites' or 'Receiver Sites', dependent upon whether they are offering or looking to receive clean material.

4.13.14 On this basis, the excess excavated material arising from the development of the Site would be managed in accordance with a hierarchy as follows:

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- Beneficial re-used as 'Clean' material within the wider agricultural land holding of the current land owner for the purposes of agricultural improvement e.g. minor land raising of poorly drained areas. This approach is subject to any necessary consents being in place.
  - Export as 'Clean' material to an appropriate 'Receiver Site' where it can be beneficially used in another development. This may include as part of a land remediation / reclamation project.
  - As a last resort, export to a suitably permitted waste disposal facility i.e. landfill. In such circumstances it remains highly likely that the material would be used beneficially for final capping and restoration purposes.

4.13.15 A Construction Environmental Management Plan (CEMP) and Construction Traffic Management Plan (CTMP) would be developed for the construction phase. The purpose of the CEMP would be to manage and report environmental effects of the Proposed Development during construction. The CEMP would set out how environmental issues would be managed in accordance with relevant legislation, regulations and best practice guidance. It would be the responsibility of the main construction contractor to develop and enforce the CEMP. The objectives of the CEMP would be to:

- Highlight environmental impacts resulting from the development and identify sensitive receptors within the development Site to the construction team;
- Reduce and manage environmental impacts through appropriate construction methods;
- Reduce and manage environmental impacts by implementing environmental best practice during the construction period;
- Undertake on-going monitoring and assessment during construction to ensure environmental objectives are achieved;
- Provide emergency procedures to protect against environmental damage;
- Provide an environmental management structure for the construction stage;
- Recommend mechanisms to reduce risks of environmental damage occurring; and
- Consult and liaise with the relevant bodies such as EA, Natural England (NE), HBC Officers and other stakeholders / the public throughout the works as required.

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4.13.16 A CEMP for a project of this scale and nature could typically cover the following key matters:

- Tree and hedgerow protection measures;
- Soils management, handling and storage;
- Drainage, water quality and hydrology;
- Dust management;
- Noise and vibration;
- Health and safety / Site management;
- Site waste management (as per the submitted Waste Audit report);
- Details of construction compounds;
- Wildlife and natural features;
- Cultural heritage;
- Contaminated material; and
- Pollution control and emergency / contingency procedures.

4.13.17 In addition to and separate from the CEMP, would be the CTMP. This could typically cover the following matters:

- Construction worker travel arrangements;
- The access arrangements for vehicles;
- Proposed routes of vehicles to and from the Application Site;
- Sizes of all vehicles and a schedule of when they will need access to the Application Site;
- Swept path drawings for the vehicle routes for all vehicle sizes;
- Details of any highway works that might be necessary to enable construction to take place;
- Parking and loading arrangements for vehicles and delivery of material and plant to the Site;
- Details of any proposed temporary Traffic Management Orders;
- Proposed overhang (if any) of the public highway (scaffolding, cranes, etc.);
- Details of how pedestrian and cyclist safety will be maintained, including any proposed alternative routes (if necessary), and any banksman arrangements;
- Confirmation of the proposed working hours;
- Start and end dates for each phase of construction;

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- Details of how traffic associated with the development will be managed in order to minimise congestion;
  - Details of any other measures designed to reduce the impact of associated traffic (such as the use of construction material consolidation centres);
  - Details of how the spread of dirt or dust onto the public highway will be prevented;
  - Details of any Construction Working Group that may be required, addressing the concerns of surrounding residents and tenants; and
  - How the approach to servicing takes into consideration the cumulative effects of other developments local to the Site with regard to traffic and transport.