

Receptor Importance/ Sensitivity	Examples
	Semi-natural woodland greater than 0.5 ha which is considered to be in 'good condition'. A viable area of habitat identified as a priority in the County/ Unitary Authority BAP. A regularly occurring, locally significant population of a species identified as important on a regional or County/Unitary Authority basis (but not identified as priority species in the UKBAP) Any regularly occurring population of a nationally important species (UKBAP, Section 74, Red Data Book, etc.) that is not threatened or rare in the region.
Local = 'Low'	Semi-natural woodland greater than 0.25 ha. Areas of habitat or populations/communities of species considered to appreciably enrich the habitat resource within the context of the parish or neighbourhood, e.g. species-rich hedgerows, ponds, etc.. A regularly occurring, locally significant population of a County/Unitary Authority important species during a critical phase of its life cycle.
Negligible	No site designation; species and habitats that are common and widespread and of very limited nature conservation value.

16.4.3

Impact magnitude has then been assessed for each site or group of sites on the four-point scale detailed in Table 16.2.

Table 16.2 Magnitude of Change (Impact)

<u>Large</u> • Loss of over 50% of a site, feature, habitat or population. • Adverse change to all of a site, feature, habitat or population. • For beneficial effects, an impact equivalent in nature conservation terms to a gain of >50% of a site, feature, habitat or population.
<u>Medium</u> • Loss affecting 20-50% of a site, feature, habitat or population. • Adverse change to over 50% of a site, feature, habitat or population. • For beneficial effects, an impact equivalent in nature conservation terms to a gain of 20-50% of a site, feature, habitat or population.
<u>Small</u> • Loss affecting 5-19% of a site area, feature, habitat or population. • Adverse change to 20-50% of a site, feature, habitat or population. • For beneficial effects, an impact equivalent in nature conservation terms to a gain of 5-19% of a site, feature, habitat or population.
<u>Negligible</u> • Loss affecting up to 5% of a site area, feature, habitat or population. • Adverse change to less than 20% of a site, feature, habitat or population. • For beneficial effects an impact equivalent in nature conservation terms to a gain of up to 5% of a site, feature, habitat or population.

- 16.4.4 The relationship between impact magnitude and the importance or sensitivity of the receptor is then used to derive a measure of impact significance as shown on Table 16.3 and applied in Table 16.5.

Table 16.3 Significance of Impact

Sensitivity	Magnitude of Impact			
	Large	Medium	Small	Negligible
Very high (International)	Substantial	Substantial	Moderate	Negligible
High (National)	Substantial	Moderate	Moderate	Negligible
Medium (County/unitary authority)	Moderate	Moderate	Slight	Negligible
Low (Local)	Moderate	Slight	Slight	Negligible
Negligible	Slight	Negligible	Negligible	Negligible

16.5 Baseline Conditions

Designated Areas and Other Desk Study Information

- 16.5.1 Llandarcy Oil Refinery is bordered on its western and southern sides by land of international importance for nature conservation (see Figure 16.1). The Crymlyn Bog Special Area of Conservation (SAC) (incorporating Crymlyn Bog SSSI, and Pant-y-Sais SSSI) is also designated a Wetland of International Importance under the Ramsar Convention, and nearly half (114 ha) has been declared a National Nature Reserve. The Bog is of special interest for its fen and swamp communities, associated invertebrate assemblages and breeding and over-wintering birds. It is the most extensive area of lowland fen in South Wales, and comprises a mosaic of valuable habitat types, including both rich and poor fen, swamp, wet heath, alder carr and acidic grassland. The citation for the SAC designation is presented in Appendix 16.A.
- 16.5.2 A large number of bird species have been recorded from the Crymlyn Bog SAC (see Appendix 16.A), including several species of conservation importance, and these may also use the Llandarcy refinery site and its surroundings during at least part of their life cycle.
- 16.5.3 Crymlyn Burrows SSSI, which lies to the south-east of the site (see Figure 16.1), is one of the last remaining sections of the Swansea Bay coastline which has remained largely unmodified by industrial development. The area comprises sand dunes interspersed with saltmarsh, and grades westwards into wet dune slacks and carr woodland. It supports a number of rare plant species, including Fen Orchid (*Liparis loeslii*) and Sea Stock (*Matthiola sinuata*) and is also an important site for over-wintering waders.
- 16.5.4 The Glamorgan Inventory of Ancient Woodland identifies two blocks of ancient woodland on the hillside above Jersey Marine (see Figure 16.1). Ancient Woodland is generally defined as land that has been continuously wooded since at least 1600. The habitat usually supports valuable assemblages of fungi, lichens, dead-wood invertebrates and ground flora, and also provides important foraging and nesting/roosting sites for bats and birds.
- 16.5.5 Information obtained from Glamorgan Bat Group reveals that pipistrelle bats (*Pipistrellus sp.*) have twice been recorded roosting in houses at Jersey Marine, and

a noctule bat (*Nyctalus noctula*) has frequently been recorded flying over the north-west of the survey area. Although a lesser horseshoe bat (*Rhinolophus hipposideros*) was recorded during the site surveys (see below), the nearest known roost for this species is 13 km to the west, on the Gower Peninsula, and the nearest hibernation site is more than 25 km to the north (Vincent Wildlife Trust, pers. comm.).

- 16.5.6 There are anecdotal reports of badgers using the woods above Jersey Marine, but no confirmed sett locations were available. A small number of setts, however, were recorded during the surveys (see below).
- 16.5.7 The Unitary Development Plan for Neath Port Talbot County Borough has not yet been finalised, so the process to designate Sites of Importance for Nature Conservation (SINCs) is still in progress, and no information on these locally important sites is currently available.

Survey Results

Plants and Habitats

- 16.5.8 The results of the various habitat surveys, including the Phase 2 botanical surveys, are summarised on the habitat maps presented in Figures 16.2a and 16.2b. For the refinery site, detailed plant species lists for each of the habitats identified, and described below, are presented in Annex 3 of Appendix 16.A. Detailed descriptions of the habitats associated with the proposed Southern Access route are presented as both text and target notes in Appendix 16.B.
- 16.5.9 The habitats within the planning application boundary comprised small blocks/areas of woodland, scrub, grassland, heathland and swamp vegetation, together with a number of areas of open standing water. Within the refinery fence (Figure 16.2a), the majority of these habitats had developed on land that had formally been occupied by large structures (mainly large storage tanks) associated with the oil refinery. Old tank bases, pipe tracks and other man-made structures were found in most habitat areas, including those that had clearly been established for several decades.

Woodland and Scrub

- 16.5.10 A number of blocks of wet woodland were recorded within the application boundary. Within the refinery fence, the most valuable of these areas, although it appeared to be drying out, was the alder-dominated woodland in the southern part of the site (see Box 12, Figure 16.2a), which supported a large amount of standing and fallen dead wood. A second area, dominated by birch and wetter with a more diverse ground flora than the other two, was located on the western edge of the refinery (Box 5), while a third woodland, also birch-dominated but with a relatively species-poor ground flora, occupied the triangular-shaped area between the disused rail lines in the north of the site (east of the South Site Reservoir, Box 2).
- 16.5.11 Further areas of wet woodland were also recorded along the route of the proposed Southern Access (Figure 16.2b). One area, dominated by alder and grey willow, was located at the northern end of the route, just south of the refinery fence (Box 1), and showed signs of becoming degraded due to grazing. A second area, also dominated by grey willow and alder, bordered a strip of swamp vegetation to the west of water body lying underneath the pipe-tracks (Box 5). This woodland forms part of the Crymlyn Bog SAC. A further two areas of damp woodland were also identified: a more open, heavily-grazed stand of alder woodland located to the north-west of Penisa'r-coed Farm, and another over-grazed patch of alder woodland just to the

north of the SAC woodland, to the east of the pipe track (see Figure 1, Appendix 16.B for details).

- 16.5.12 Wet woodland is a Priority Habitat in the UKBAP and Neath Port Talbot local BAP, and is a habitat of principal importance listed under Section 74 of the CRoW Act (2000).
- 16.5.13 The remaining blocks of woodland within the application boundary generally comprised areas of oak- and birch-dominated woodland that had become established on steep slopes (for example, Boxes 6, 10 and 12, Figure 16.2a, and Box 4 on Figure 16.2b), together with areas of secondary and planted woodland. It is likely that the woodlands within the areas indicated by Boxes 10 and 12 represent remnants of upland Oakwood, a habitat of principal importance listed under Section 74 of the CRoW Act (2000).
- 16.5.14 The application area also supported patches of dense, Common Gorse-dominated scrub, such as those at the northern and southern ends of the refinery (Boxes 1 and 10, respectively, Figure 16.2a), as well as several other areas of continuous scrub, and these are likely to represent an important nesting and foraging resource for birds, as well as provided cover for other species, particularly reptiles (when in conjunction with more open habitat).

Dry Grassland

- 16.5.15 As a result of the thin soils prevalent over much of the site, relatively species-rich grassland was quite widespread within the refinery fence. The largest and most diverse of these grasslands was found on the large hill-top area indicated by Box 6, Figure 16.2a, while a smaller, and slightly less diverse area was located in the south-west of the site (Box 11). These grasslands also supported diverse invertebrate faunas (including a Notable A beetle, and two Notable B species and 25 'local' species, respectively), and therefore would be considered to be of particular value [Notable A species are those known to occur in 15-35 10km squares in the UK, Notable B species occur in 35-100 squares, and 'local' species are known from 101-300.]
- 16.5.16 Many of the remaining grassland areas within the refinery fence had developed on former tank bases (for example, Boxes 4 and 9), while smaller patches were recorded amongst the areas of dense scrub found throughout the site. The grassland at the northern end of the hillside indicated by Box 12 was found to be of particular value for invertebrates, including 'rare' Red Data Book species, while the large areas of dense gorse scrub and herb-rich grassland indicated by Boxes 10 and 11, together with the area of scrub/scattered grassland to the north-west of this, were of particular value as nesting and foraging habitat for birds. These latter areas also constitute a valuable buffer between the refinery and the SAC.
- 16.5.17 Along the Southern Access, much of the habitat within the survey corridor comprised species-poor, semi-improved grassland which had been heavily grazed and which was becoming encroached by bracken (see Figure 16.2b). A couple of the fields to the west of the proposed route, and to the south and north of the farm buildings, supported only a limited range of grasses and a few common forbs, and were classified as improved grassland.

Wet Grassland

- 16.5.18 Within the refinery fence, large numbers of marshy grassland plants were recorded in areas where the tank bases had not been broken up, resulting in impeded drainage.

Areas supporting particular plant diversity included those at the southern end of the area indicated by Box 12, Figure 16.2a). In addition, two areas of marshy grassland were identified to the north and south of Penisa'r-coed Farm, within the survey corridor of the proposed Southern Access (Box 2, Figure 16.2b). The marshy grassland to the south of the farm was dominated by Soft-rush and was, at the time of the survey, in the process of being in-filled. Neither of these areas of marshy grassland were considered to be of particular intrinsic value, although they did represent potentially important habitat for grass snakes, reed buntings and reed warblers (see below).

Heathland

16.5.19 Small patches of Heather (*Calluna vulgaris*) were encountered throughout the refinery site in areas of grassland and woodland, but few areas were dominated by Heather. The largest area of heathland, on the steeply sloping hillside indicated by Box 6 (Figure 16.2a), was becoming colonised by young birch trees. Invertebrate surveys of this heathland revealed the presence of a rare rove beetle, *Aleochara fumata*, previously unrecorded in Wales. Smaller areas of heathy vegetation occurred in mosaic with scrub and grassland in several parts of the site, particularly within the area indicated by Box 12 and in the southern Tank Farm.

16.5.20 Heathland is a UKBAP and Neath Port Talbot local BAP Priority Habitat, and is a habitat of principal importance listed under Section 74 of the CRow Act (2000).

Swamp and Open water

16.5.21 A number of former tank bases had, over time, filled with water, and as a result supported swamp/fen-associated species. A particularly notable flora was recorded in the tank base within the scrub at the northern end of the area indicated by Box 9 (Figure 16.2a), and this area would be classified as S25a *Phragmites australis* – *Eupatorium cannabinum* tall herb fen (*Phragmites australis* sub-community). Although fen habitat is a UKBAP Priority Habitat, the tank bases are not considered to comprise priority habitat given their anthropogenic and ephemeral nature. Narrow strips of swamp vegetation were also recorded to either side of the long, narrow water body at the southern end of the Southern Access (Box 5, Figure 16.2b). This swamp habitat, together with the adjacent wet woodland, is part of the Crymlyn Bog SAC, and thus represents habitat of principal importance listed under Section 74 of the CRow Act (2000).

16.5.22 A number of areas of open water were also recorded during the surveys, ranging from large reservoir areas to small ephemeral water bodies, the majority of which showed signs of chronic contamination. However, in contrast, the triangular water body located in the centre of the site (Box 8, Figure 16.2a) supported a wide variety of plant species, including broad-leaved pondweed and white water-lily on the water surface, with bulrush dominating the margins. This pond was also found to support a breeding population of great crested newts as well as a rare caddis fly (see below). This pond, together with the surrounding area of scrubby heathland which is likely to be used by the great crested newts for foraging and hibernation, represented a valuable habitat feature.

16.5.23 The water body to the north of the Tennent Canal (Box 6, Figure 16.2b) is underneath the existing pipetracks, and consequently showed some signs of contamination with oil visible in the substrate and on the water surface. However, its eastern and western margins supported large areas of common reed, while much of the open water was dominated by pondweed species, with some algae present on the water surface. This water body is within the Crymlyn Bog SAC.

Invasive/non-native Plant Species

- 16.5.24 One stand of Japanese knotweed (*Fallopia japonica*) was identified on the southern bank of the Tennent Canal and this is indicated by red shading on Figure 16.2b. It is offence under the Wildlife and Countryside Act (1981) to spread or cause the spread of this plant into the wider countryside. Material containing any amount of plant material has to be treated as 'contaminated waste'.

Bryophytes

- 16.5.25 A total of 75 species of mosses and liverworts were recorded during the bryophyte surveys (see Appendix 16.A, Annex 3b, for a full species list). The most valuable sites for bryophytes were those supporting old woodland, particularly those with impeded drainage (indicated by Boxes 5, 10 and 12, on Figure 16.2a). The number of species recorded is more an indication of the range of micro-habitats and substrates which exist across the site, rather than a reflection of the intrinsic value of the habitats for lower plants. Indeed, no rare species were recorded, and the majority of the bryophyte assemblages were not particularly species rich.

Lichens

- 16.5.26 The lichen floras occurring within the refinery fence were found to be relatively species-poor (see Appendix 16.A, Annex 3c for a full species list). Only 47 species were found, and again no rare species were recorded. The most valuable sites for lichens were the semi-natural habitats on the periphery of the site, in particular the oak woodland at the south-western end of the site (indicated by Box 10 on Figure 16.2a), the heathy rock face (to the south-east of the grassland indicated by Box 11), and some boundary oak trees at the very north of the refinery site, near the south-eastern corner of the North Site Reservoir.
- 16.5.27 The relatively low diversity of the lichen flora is probably due to a previously high level of air pollution; indeed, some trees supported large patches of *Lecanora conizaeoides*, a species that has largely disappeared from Britain as a result of improvements in air quality. However, the presence of some pollution-intolerant species suggests that the air quality has improved significantly since the refinery ceased operating. With the retention of suitable habitats, such as woodland, old tress and natural outcrops and stones, a richer flora is likely to develop over the next few decades. More information on air quality is provided in Section 9 of the ES.

Protected Species and other Species of Nature Conservation Value

Invertebrates

Terrestrial Invertebrates

- 16.5.28 The invertebrate surveys revealed a very diverse assemblage, including a number of species of conservation importance. A total of 300 species were collected during the pitfall trapping, flight interception trapping and sweep netting within the refinery fence over the three summer sampling periods in 2001. A number of the species recorded were of conservation importance, including two Red Data Book species (i.e. they are known from fewer than 15 10km squares in the UK) and eight that are nationally notable/scarce (i.e. they are known from between 15 and 100 10km squares). Detailed results are presented in Annex 2 to Appendix 16.A.
- 16.5.29 The high diversity is likely to be due to the variety of habitats present, as well as to the close proximity of the Crymlyn Bog SAC, which is known to support a very

extensive invertebrate fauna. The most valuable areas for invertebrates were the large mosaic of woodland, grassland and heathland in the south-eastern corner of the site (Box 12, Figure 16.2a), the areas of species-rich grassland in the south-western corner (Box 11), and the heathland/grassland habitats on the hillside in the centre of the site (Box 6). However, species of conservation importance were distributed throughout the site, including areas of regenerating rubble and hard standing.

- 16.5.30 One of the most valuable habitats for invertebrates was the large expanse of acid grassland and marshy grassland at the southern end of the hillside indicated by Box 12; species richness was relatively high with invertebrates collected including a 'rare' (Red Data Book category 3) horse fly, *Haematopota grandis*, two 'Notable B' species and 32 species of 'local' status. The grassland at the northern end of this area also supported a relatively diverse invertebrate fauna, including a number of species of conservation importance. Notable B species were also recorded in the grasslands within the areas indicated by Boxes 4 and 11.

- 16.5.31 A rove beetle, *Aleochara fumata*, previously unrecorded in Wales (and considered likely to be a 'rare', RDB3, species), was collected from the heathland hillside (Box 6) and the large area of scrub on the north site (Box 1). However, subsequent targeted surveys for this species across the site in 2003, using mushroom traps, failed to record any more individuals.

Moths

- 16.5.32 In addition to the 300 invertebrate species collected within the refinery fence by pitfall trapping, flight interception trapping and sweep netting, a total of 195 moth species were recorded during the three light-trap surveys. A full species list for the site is presented in Appendix 16.A (Annex 2). Moth traps were also used to assess the fauna supported by the habitats along the route of the proposed Southern Access, and again a valuable moth fauna was recorded, particularly associated with the areas of marshy grassland (Box 2 Figure 16.2b; see Appendix 16.B for details).

- 16.5.33 A number of Notable and 'local' species were recorded during these surveys, including Dentated Pug, Silky Wainscot, Thyme Pug, Marsh Opaque-barred, Dusky Thorn and Frosted Orange, all of which are local priority species. However, the most significant result of the moth surveys was the presence of the double line moth, which was recorded both in the south-west of the refinery site, near to the Crymlyn Bog, and within the corridor of the proposed Southern Access route. This 'Notable B' species is listed as a Priority Species in both the UKBAP and the Neath Port Talbot LBAP, and is a species of principal importance listed under Section 74 of the CROW Act (2000). It is largely restricted to unimproved and marshy grassland habitats in Devon, Cornwall and south-west Wales, and has recently been recorded from only four other sites in Neath Port Talbot. Known foodplants include a range of grasses, such as Cock's-foot *Dactylus glomerata*, Meadow-grass (*Poa* spp.) and Bent (*Agrostis* spp.). It is therefore considered likely that its population is centred on Crymlyn Bog, but that areas of marshy grassland in the vicinity of the Bog are also used.

- 16.5.34 Light traps can attract moths from relatively large distances so it is not possible to make detailed assessments of the moth faunas of particular habitats. Nevertheless, the results of the moth surveys suggest that the areas of scrubby grassland, woodland and scattered patches of heathland and wetland in the southern parts of the site, and along the route of the proposed Southern Access, are at least of some local nature conservation importance for moths, and probably represent a valuable extension to the habitats found in the SAC.

Aquatic Invertebrates

- 16.5.35 A relatively diverse assemblage of aquatic invertebrates was recorded from the triangular pond (Box 8, Figure 16.2a), including two species of conservation importance. The most important of these was the caddis fly *Tricholeiochiton fagesii*, a species recently given the status of 'rare' (RDB3). This caddis fly has a very scattered distribution, and has only previously been recorded from two other sites in Wales, in Gwynedd and South Glamorgan. The hairy dragonfly *Brachytron pratense* was also recorded from this pond, both as larvae and as adults. This species is very localised in its distribution and is classified as 'Notable B'.
- 16.5.36 The South Site Reservoir (Box 2) supported a less diverse invertebrate community; however, despite the apparently polluted status of this water body, it did support a reasonable number of dragonfly species, and has the potential to become a valuable wetland feature following remediation. The refinery site as a whole also appeared to be important for the red-veined darter, a migrant dragonfly, although the species was not recorded breeding. Detailed results of the aquatic invertebrate surveys are presented in Appendix 16.A, Annex 2).

Amphibians

Frogs and Toads

- 16.5.37 None of the features surveyed for amphibians in March 2002 were being used by breeding frogs or toads. The northern and southern reservoirs are unlikely to be used by amphibians due to the oil contamination. Frog spawn was, however, recorded incidentally in ephemeral water bodies (such as flooded ruts), particularly in damp habitats in the south-eastern corner of the site.

Newts (including Great Crested Newts)

- 16.5.38 The presence of great crested newts (*Triturus cristatus*) was confirmed within the triangular pond (see Box 8, Figure 16.2a), and this pond was also revealed to support a large population of palmate newts (*Triturus helveticus*). Great crested newts were recorded during both the 2001 and 2003 surveys, and the peak counts indicate that this water body supports a 'moderate' population of great crested newts (see Appendices 16.1 and 16.2).
- 16.5.39 The areas of heathland, grassland, wetland and scrub surrounding the triangular pond are likely to be the most important areas of foraging and hibernation habitat for the great crested newts breeding in the pond. However, decommissioning activities in this area, largely involving the removal of tanks with unavoidable disturbance to neighbouring habitats, have lead to the loss of a proportion of the newt foraging habitat.

Reptiles

- 16.5.40 The assessment of potentially suitable reptile habitat across the refinery (see Figure 5, Appendix 16.A) indicated that much of the site, particularly in the south, is likely to be potentially valuable for reptiles, particularly as basking and foraging habitat. The site is known to support four of the six UK species of reptile (slow worm, common lizard, grass snake and adder), and appears to represent an important site for common lizards in particular. The most important areas for reptiles were the areas of heathland, particularly those on south-facing slopes, but impacts on reptiles will need to be considered across the site, including areas of rubble and hard standing otherwise considered to be of limited nature conservation value.

- 16.5.41 Surveys undertaken between June and August 2004 revealed that the route of the proposed Southern Access is also of value to reptiles. Grass snakes and common lizards were present in reasonable numbers. The most valuable areas for reptiles were the area of swamp where the pipe-tracks cross the SAC (Box 5, Figure 16.2b), the wooded bank (Box 4), and the farm buildings and around the dense stands of bracken and gorse at the north-eastern end of the survey corridor (Box 3; see Appendix 16.B for details).

Birds

- 16.5.42 It is clear from the bird surveys that the area within the application boundary supports a diverse bird fauna, including a number of species of conservation importance. A total of 65 species were recorded during the surveys undertaken throughout 2001 and 2004; of these 40 showed signs of breeding on the site. Willow scrub dominates much of the area within the refinery fence, and willow warbler was the most abundant breeding species recorded. Whitethroat, robin, wren, blackbird, blue tit, great tit and song thrush were also present in large numbers. Along the proposed Southern Access, the most frequent species recorded was the blackbird, although robin, wheatear, great tit, chaffinch and linnet were also abundant.
- 16.5.43 Of the 10 UKBAP Priority Species of bird known to occur in Neath Port Talbot County Borough, five were recorded within the refinery fence (bullfinch, linnet, reed bunting, song thrush and spotted flycatcher), whilst four were recorded along the proposed Southern Access (skylark, song thrush, linnet and reed bunting). These species also feature in the Neath Port Talbot local BAP and on the RSPB Red List of birds of 'high conservation concern', and are identified under Section 74 of the CRoW Act, as being of 'principal importance in Wales for the purpose of conserving biological diversity'.
- 16.5.44 One other local BAP Priority Species, lapwing (an RSPB Amber List species of 'medium conservation concern'), was also recorded within the refinery fence; this is also a species of principal importance listed under Section 74 of the CRoW Act (2000). In addition to the lapwing, eleven other Amber list species were also recorded on the site.
- 16.5.45 Of the species of conservation importance, bullfinch, linnet, song thrush and lapwing were all confirmed to be breeding within the application boundary. Lapwings were only recorded breeding on the area of hard standing in the north-east of the site (see Box 1, Figure 16.2a). Although they are also known to nest on an area of hard standing adjacent to the site, on the D'Arcy development, this land is also due for development.
- 16.5.46 The winter bird surveys indicated that the refinery site is not of particular value as winter foraging habitat for important bird species from the SAC. None of the valuable species known to occur on the Crymlyn Bog were recorded using the site during any of the winter surveys. It was clear, however, that the network of water bodies located within the containment area (Box 7) are potentially of value for lapwings. These ponds are heavily contaminated with oil sludge, but are currently in the process of being cleaned up as part of the remediation of the site. The proposed reinstatement in this location of the reedbeds, within a mosaic of more open wetland areas, will lead to considerable improvement in the suitability of this part of the site for this important species.
- 16.5.47 The broad distribution of BAP bird species throughout the area within the application boundary, and the high diversity of bird species recorded, indicates that both the refinery and route of the proposed Southern Access comprise a wide range of habitats that are of value to birds, in particular song thrush, linnet and bullfinch.